THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXII. SATURDAY, JUNE 10, 1893. NO. 23.

ORIGINAL ADDRESS.

THE ADDRESS[1] OF THE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.[2]

BY HUNTER McGUIRE, M.D.,
OF RICHMOND, VA.

THE members of the American Medical Association, representing 100,000 doctors, with all the intelligence, professional cultivation, trained skill and experience, and high personal character, which they should possess—dealing with matters affecting the mental and physical energies of this entire generation of Americans, and the next—cannot but contemplate with gravest concern the important duties, the weighty responsibilities, resting upon them.

As patriotic citizens, we owe it to our country, as well as to the Association we represent, earnestly to strive to evolve, through hard work, thorough observation, and knowledge of the needs and demands of all sections of the country, the things that are necessary, not only for the preservation of health, but also for the highest conditions of physical and mental development.

There is no organization in this country so well equipped as ours for the accomplishment of the work we have undertaken. We more thoroughly represent medical opinion than any other body of a kindred character, the delegates composing this association being drawn principally from other organized medical societies, coming not only from the larger but also from the smaller medical bodies; representing all sections of the country, from Maine to Texas, from California to Virginia. When all these are gathered together in our annual sessions our rolls may fairly be supposed to display the names of the most learned and distinguished of the medical men throughout the land.

Speaking in general, our prime object is to study the origin of disease; the immediate occasion of its outbreak, with the means of preventing it, and the best means of loosening its malignant hold, if once fastened upon the community or the individual. Secondarily, and yet with a due appreciation not only of its value, but of its necessity as a means to the chief end, we labor to secure for this organization, and for all allied with it, the greatest possible efficiency in the performance of the practical work intrusted to us.

The laws of Nature, systematized and arranged upon lines that will meet all demands essential to the preservation and maintenance of the universe, when violated, are also sufficient for its destruction. Therefore we look to the material conditions surrounding us, coupled with the proneness of all animated nature to organic derangement and decay, for the real cause of death in the human family. While human life has been progressively prolonged during the past century, through a better appreciation and enforcement of hygienic requirements—by legal and police compulsion under the stronger governments, and in those of liberal form by an enlightened public opinion demanding special legislation in regard to such requirements—there remains much to be accomplished before even relative perfection can be reached. In the United States I believe we are on the threshold of great improvements in this direction. To secure them demands united action. It belongs to us of the medical profession, by systematic, thorough, and intelligent observation, to inform ourselves of the minutiæ essential to a thorough knowledge of the origin of the maladies common to the country, as well as those that are introduced from without. That being done, our united force must be brought to bear to secure and put in active operation such measures as will effectively stamp out the one group and exclude the other.

In order that every obstacle may be removed and every agency brought to bear that can contribute to success, the medical man must gird himself for a stern battle with ignorance and prejudice, with misdirected intelligence, and jealous conceptions of right. Our battle is first with the people, and then with their representatives. The average citizen supposes that there is some subtle and selfish design on the part of the physician, especially on the part of associated physicians, to deprive him of some portion of the personal privileges he now enjoys. The American believes that his house is his castle, and even as he worships his household gods, so does he worship Magna Charta, Habeas Corpus, Trial by Jury, and Representative Government. The mental state thus engendered is one of morbid sensitiveness, and develops a temper that blindly strikes at all comers, and not least venomously at the investigator who would inquire into the condition of the premises where disease originates. Inquiry must be pushed in spite of all obstacles. There is no longer a question as to the absolute necessity for properly policing our cities, towns, villages, and private houses. Healthful water-supply and drainage, the right location of water-closets and sinks, and their disinfection, with the ventilation of all inhabited buildings, are now admitted to be essential to the maintenance of a high standard of health in every community. No physician is fairly discharging his duty who fails to seek information on all these subjects, and to take advantage of the knowledge offered him; and he is criminally negligent if he fails to act upon these fundamental principles when the occasion arises.

Tact, discretion, and painstaking instruction are often essential to convince interested parties of the necessity for special legislation, in order to protect the health of the general public. Politicians are, as a rule, timid, apprehensive, and eminently conservative where innovations against custom and habit are involved or where popular objections are likely to be encountered. They can be made to move only through pressure brought to bear by a united public sentiment. It should

[1] In abstract. [2] Delivered at Milwaukee, June 6, 1893.

be our endeavor to educate the masses up to the requirements in this direction. This we can best do by showing them the dangers that daily and hourly surround them from such diseases as are endemic and those that are of an epidemic and contagious nature. Through the politicians, acted upon by and coöperating with an intelligent public sentiment, State and local Boards of Health must everywhere be established. Their care will be to put in action the great *principle of prevention*, now so much better understood. Taking advantage of the operations of Boards of Health in Germany, and especially in Great Britain, we have, without conjoint action, accomplished much in certain limited sections of the more densely populated parts of the United States in preventing the outbreak of disease, as well as in curtailing its spread, and absolutely eradicating certain affections that threatened to become widespread and devastating.

Much is to be learned in connection with the endemic diseases of the various sections of our country. The malarious diseases prevalent amongst us have been extensively studied. Their immediate origin has not been definitely determined; but the conditions of heat, moisture, and vegetable decomposition are well understood as most potent in their production. It is a law long since ascertained on the Continent of Europe, in Great Britain, and in America, that wherever the trend of the land admits of the drainage of collections of fresh or brackish water, these maladies can be brought under control—in fact, can be permanently driven from the country. Yet a complex problem remains for us, viz.: How to effect these salutary results in the basin of the Mississippi, with its sluggish streams and torpid bayous; with the marsh-lands of the seacoast in general, and the vast swamps in the interior. Whilst this is a problem to be solved in the main by sanitary engineers, yet the physicians of the country must come to their aid by contributing their knowledge upon the subject, and inciting the inhabitants of the States to activity, in order to provide, through legislation, the means for carrying out the measures that may be recommended.

Not only in that great valley, but in sections, States, and cities, more favorably located, a mighty need exists and a great work is to be done.

To recur to the membership and organization of this and its allied associations: We cannot too highly estimate the importance of attaining the greatest degree of excellence possible in the various independent organizations that are here represented. This can be more effectually obtained through the State and local societies that are in active and friendly relations with us. The members of these respective organizations should strive to enlarge their usefulness by bringing into them all reputable physicians who reside within their jurisdiction. This can best be done by demonstrating to outsiders, through the excellence of their work, the importance and practical use of becoming members of the State societies, and leading them to feel that to keep abreast of the times it is necessary to mingle, at least once a year, with the other progressive medical men in the State, for the purpose of interchanging views on current professional topics and discussing and determining such things as appertain to the protection of the health and the general welfare of their *clientèle*.

The State societies should strive to induce their members to form societies in every county of their respective States, in all cities, and in all townships or parts of counties where there are sufficient numbers of physicians to justify such organizations. In this way a local and general activity will be engendered, and the average standard of professional intelligence raised to a degree that must result in great good to the residents of each State, and through general discussions of all leading questions appertaining to the health and welfare of each and every locality, measures will be evolved and remedies discovered that will prove of untold advantage to the community at large.

As for the workings of this Association—its organization has improved with each year, and I trust and believe that this advancement will be continuous until we reach that degree of systematic arrangement that will enable us to accomplish the greatest amount of good attainable in the time allotted to its annual meetings. Improvement in details is necessary for the realization of this result, and I trust that some plan will be devised that will assign more of the special work to the various sections, leaving the society as a whole to take charge of matters requiring its general supervision and determination. This is a subject to which I desire to call your special attention and to emphasize it, for I am confident that a majority of you will agree that it is of paramount importance. As essential to this purpose I sincerely hope that you will adopt some plan by which will be checked the growing tendency to read or have read before this body lengthy papers that could be considered and dealt with in a much more effective manner by the separate sections.

One or two subjects need to be specially and separately considered.

Constitution and Code. The committee to which was referred the question of revision of the Constitution and By-laws of this Association will present an entirely new paper, containing many of the valuable features of the old one; leaving out some, however, that in my opinion it was very desirable to retain. I am glad that our rules require that this report shall lie over for a year before being acted upon. Ample time for the consideration of such an important subject will be secured in this way.

The same committee will ask that the subject of the Code of Ethics be allowed to remain over for another year. While my own convictions in regard to the Code are of a very positive kind, I feel that, as the subject cannot be considered until the report of the committee is received, good taste and good policy both require that I should not discuss it by introducing it in this address.

I have one suggestion to make: I think that a revision of our Code should be referred to the several State medical societies entitled to representation here, and that these societies should report their action at the annual meeting of the American Medical Association. This would give us a fair expression of the opinions of the representative societies from all parts of our country, and every reputable American practitioner of medicine would have an opportunity to vote on the subject. At present, if the annual meeting is held in the West, the East and South have a minority of votes; similarly, if it be held in the East, the West and North; and if held in the

South, the East and West are likely to be in number of votes unfairly represented. Equal representation in votes and views for all parts of our common country, free from the domination of States immediately adjacent to the place of our annual meeting, should be obtained in acting upon such an important subject as a revision of the Code of Ethics. It would be well for the State medical societies to obtain and include in the vote of each State all county and district medical societies entitled to representation here.

Let the medical department of the Army, Navy, and Marine-Hospital Service also have a vote in this matter.

The medical societies referred to constitute a very large majority of our members. The "Members by Invitation," the "Permanent Members," and "Members by Application" have, by our constitution, no vote.

Let a majority of States decide this question, and let us agree to abide by their decision.

Medical Examining Boards. A large number of States have appointed, and have in operation, "State Medical Examining and Licensing Boards," which have contributed greatly to the elevation of the standard of medical education in their respective States and in the country generally. In some instances, in consequence of the existence and action of these boards, colleges have raised their requirements for entrance, and especially for graduation, and now send out men better fitted in many ways for the practice of their profession. I feel confident that before many years have passed every State in the Union, for its own protection, will have its examining board. As far as it lies in our power we should foster and encourage these medical examiners, who have a difficult and often thankless task to perform. A conference of delegates from each State Board might result in a uniform State law, which is desirable. As it is, at this time some of the State laws regarding the boards are defective.

Secret and Poisonous Medicines. I think this Association owes to the people of this country an earnest effort to stop the sale of secret and poisonous medicines. Free trade in physic is permitted, as far as I can learn, only in this country, and any quack can advertise in the reading and other columns of our newspapers his so-called patent medicines. Many of these nostrums are known to be poisonous, and of course hurtful. All over Continental Europe grocers and druggists are forbidden to sell any pharmaceutic preparations or compounds. This right is restricted to the pharmacist or apothecary, and he is often subjected to rigorous inspection, to very rigid laws, and to heavy penalties for their violation.

If each State would require the vender of any secret remedy to subject his formula to a board appointed by the State for this purpose, said board having the power to grant or refuse a license to sell, this already great and growing evil would be materially lessened or stopped.

Smallpox, Typhoid Fever, etc. The police regulation of smallpox is a matter for the gravest consideration upon the part of the General Government and of the several States of the Union. Regulations, full, comprehensive, and complete, should be formulated for the prevention of its introduction from without, and its eradication wherever it appears in our land. Notwithstanding the organizations known as "Anti-Vaccination Societies," which so often send out all sorts of misrepresentations, and notwithstanding misstatements from other sources, from the time of Jenner's conclusive demonstration (in 1796) down to the present hour, vaccination has been growing in favor, and now the great majority of the educated classes have become convinced of its importance. Compulsory laws have been put in force in the larger number of European countries, and especially in the German Empire, where not only the army, but also the people at large, are compelled to submit to vaccination at stated intervals—once every third year being the rule for the army.

Our large and constantly augmenting population, the facilities for travel, and the disposition to use these facilities, render it imperative that we should endeavor to obtain, as far as possible, from the respective States composing our Union legislation of a uniform character upon this subject. Until this is done there will be a constantly impending danger of local, and even general, outbreaks of this universal scourge of the human family. Were it not for the municipal powers that have been granted to our leading cities, and exercised by them, this disease would be perpetually with us, and our vital statistics would groan under the burden of its polluting ravages.

A study of the causes and conditions that produce typhoid fever, the curse of the mountain and Piedmont regions, demands the utmost industry and closest observation on the part of physicians whenever this disease makes its appearence. The great majority of writers upon this and kindred topics unfortunately reside in cities where the true type of the disease is rarely to be found, and where they are too liable to seize upon conditions that they know to be conducive to disease in general, and assign them as the active factors. Sinks, privies, sewer gas, and polluted drinking-water are the specters that flit across the stage to deride and delude these investigators. I cannot refrain from expressing the hope that there will arise some eminent man, or more than one, in the rural regions, possessing the intuition that is akin to genius, who will be able to show with almost mathematic certainty the real circumstances and combinations upon which this malady depends. Be it germ, be it mite, or leukocyte, the result remains the same. Individual diseases with their causes are better segregated in the country, and more reliable observations ought to be possible. Jenner and Koch were country doctors.

The contagious diseases, mumps, measles, whooping cough, scarlet fever, and diphtheria, annually carry to the grave thousands of our people, chiefly from the youths and infants, those who are nearest and dearest to us and who appeal most strongly to our tenderest sympathy. These maladies are increasing in a different ratio to the advance in population, and while moderate treatment has done much to alleviate the sufferings of these unfortunate victims, mainly through hygienic measures, still the mortifying fact is patent that their genesis is wrapped in the same obscurity that it was two thousand years ago. The germ, the malignant little parasite, we may have discovered as the source of all these troubles; but why or whence this germ? That defies our knowledge.

Quarantine. One of the most important questions of the hour is that of quarantine. During the past year

the apprehensions of the country have been fully aroused upon this subject, and there is every disposition on the part of the people to have such laws enacted as will render us safe against the introduction of Asiatic cholera and typhus fever. The latter has entered one of our principal ports, and has infected a limited number of the population of the city of New York. Thanks to the efficiency of the Board of Health, it has been kept under relative control, and is now abating. The former, starting from its home in the East some two years ago, and following the track along which it has heretofore traveled, has not only reached the most frequented ports of western Europe, but has traversed the Atlantic, and during last summer sought admission to our shores. Through a number of fortuitous circumstances, rather than by the aid of any well-ordered quarantine, we have been spared the misery of an active invasion. The disease has retreated to the farther side of the ocean, and seems to be preparing, with renewed energy and increasing activity, for a second attempt to invade us. Shall it succeed? This is the vital question that we are called upon to meet and, if possible, to solve. The subject is not incapable of solution; but there are difficulties that beset us, owing to the character of our institutions and the organic laws under which we live. It has, on more than one occasion, been shown that the strict enforcement of quarantine laws in America, as well as in Europe, has prevented contagious diseases from entering the seaports of a country when full and judicious measures were put into execution.

During the late war between the States, every seaport along the South Atlantic and Gulf States that was effectually blockaded was spared an invasion of yellow fever. Even New Orleans, which, prior to that period, had been so frequently visited by this disease, was kept exempt from it through the measures resorted to for the purpose by the military commandant. Even after one case had escaped the vigilance of the quarantine officer and had taken up its abode in one of the most populous sections of the city, the disease was prevented from obtaining a foothold by prompt removal of this case to a vessel in the river, which made a speedy exit from the port. Wilmington, North Carolina, which, until the last year of the war, remained comparatively open to vessels plying between that port and the outside world, was subjected to a frightful scourge from yellow fever, owing to its introduction from the Bermudas. Do not these facts warrant the conclusion that yellow fever is of alien origin, and never endemic in this country? I offer this illustration to show what can be brought about when a preventive system of quarantine is scrupulously carried out. The circumstances and environment were such at New Orleans as to make it imperative upon the military officers there to keep the disease out of the city, as the army of occupation was, owing to the configuration of the country, necessarily encamped within its limits. It was an army recruited from the more northerly section of the United States, and unaccustomed to the oppressive and enervating heat of so warm a climate. Had yellow fever once established itself, that army would simply have been annihilated, and the chronicler of the leading events of the war would have found adequate figures of comparison only in the plague of London and the Black Hole of Calcutta. These visitations come to us, however, in the majority of instances, in times of profound peace, when it is difficult to induce the authorities of the country to enact laws sufficiently stringent to maintain a judicious quarantine. In America, while we enjoy the blessings of a freedom never before equaled, the greatest enthusiast will not fail to acknowledge that our form of government has some defects when it is called upon to grapple with questions that require the curtailment of the personal liberty of the citizen for the benefit of the people at large.

There is another drawback to the enactment of general quarantine laws. Our seacoast towns, as ports of entry, are jealous of their local and territorial trade-rights. A grand network of railroads spreads over our entire country, and the ordinary channels of trade can be interrupted and the trade diverted into new directions whenever free ingress and egress to traffic do not exist at any one of our seaports. Appreciating these facts, and ever jealous in guarding their commercial interests, public sentiment in such communities always tends to suppress the truth at the inception of an epidemic; and even the press, usually free and outspoken on all matters in which the general public is interested, remains practically silent until its utterances cease to be news and a widespread epidemic has advertised itself. This is a matter of profound regret; and yet so long as human nature retains its present characteristics we may always expect such causes to produce corresponding results.

To depend upon municipal quarantines for the protection of this great country from the spread of contagious diseases is to reckon without your protecting host. The selfishness of human nature, the desire for gain, the aggressions and the potency of wealth will all be brought to bear upon those in authority, and will, if possible, drive from place and power conscientious officers, who, in the discharge of their duty, fail to comply with their behests and interfere in any way with what they consider their rights and privileges. I trust that I shall not be held as animadverting too severely upon this subject. These remarks are not intended for any particular locality. What I have stated is sustained by the history of the past epidemics that have broken out in our country. No one can ever be safe so long as the local authorities at ports of entry are left as the sole protectors of the nation against the entrance and spread of epidemic and contagious diseases.

The peculiar organization of our Union of States is such as to deter those in official positions from exercising authority in any case except when the right so to do is clear and well defined. The jealous care with which the rights of the States were guarded in the formation of the Constitution and the special declaration by amendment to it, that all powers not specifically granted to the General Government were reserved to the States; the provisions defining the rights of the government and the reserved rights of the States have been the means of engendering more antagonisms than any other issues that have arisen under it. I need not recur to the stirring scenes that have been enacted in the United States Congress on many eventful occasions. The antagonisms referred to brought on our great civil contest, with the results that are so painfully fresh in the memories of all. It is not surprising that politicians are averse to agitating

any questions that may in any manner trammel the rights of the States through laws passed by the General Government.

The trend of public sentiment, as shown by the laws enacted by Congress, and the decisions of the Supreme Court of the United States for the last twenty years, manifest very clearly that the public conscience recognizes the fact that a return to old conceptions on this subject is necessary for the general good of the country. While we may admit this to be true, yet, in the particular issue we have in hand, may we not fall into very grave error by failing to perceive what is clearly our duty to the people as a whole? "The general welfare" clause of the Constitution clearly gives to Congress the right to legislate for the preservation of the health of the citizens of this country and for the prevention of the spread of epidemic and contagious diseases among them. There will be many who will cavil at this application of the clause referred to, and the attempt to enact a quarantine law of a rigid and vigorous character will meet with stout and bitter resistance.

Reared in the school of strict construction as to the rights of the States, I do not hesitate to declare that the time has at last arrived in this country when, owing to the imperative exigency growing out of our great increase in population, the facilities for travel and intercommunication, and the constant flow of immigration from all parts of Europe, all patriots representing every shade of political opinion should unite in demanding of Congress the passage of a law, strong, concise, and yet comprehensive, that will enable the government to properly protect its citizens against disease whenever, in the discretion of its officers, the emergency may have arisen. There is as much reason why the power of the Federal Government should be invoked to aid in repelling the advent of pestilence as to aid in repelling the advent of a hostile fleet or army. Once established, pestilence would cost our country more human lives and more money than a war with any foreign power. These remarks are made in consequence of the failure of our late Congress to pass such a bill. The measures adopted are partial and temporizing, and fall far short of the exigencies of the hour. I shall not attempt to give the details of this law, approved the 15th of February, 1893, known as "An act granting additional quarantine powers and imposing additional duties upon the Marine-Hospital Service." Its provisions are, no doubt, familiar to you all. All of the sections relating to Consular regulations abroad are everything that we could wish; but when the act comes to be applied on this side of the water it is grossly defective. All on the other side of the Atlantic is compulsory; all on this side permissive and coöperative. So long as the government officers are only permitted to coöperate with States and municipal quarantine officials, just so long will the law be imperfectly executed. We must not let the matter rest here. This society should endeavor to arouse the people to a correct appreciation of their danger and of their rights and duties in regard to it, and never cease agitating it until Congress shall be forced to enact such laws as are "necessary and proper" for meeting each and every emergency.

Personally, I am not in favor of a quarantine of detention, but of a quarantine of anticipation and prevention. This is the true way of avoiding the introduction of epidemic diseases into this country. The modern system of quarantine is not a system of exclusion or even of prolonged detention; it is based upon the application of scientific methods and apparatus. I call your special attention to the significant fact that this "system of maritime sanitation" has kept New Orleans free from yellow fever for the last twelve years, and absolutely without interfering with commerce; it has been pronounced by competent observers the most complete system of quarantine in the world, and it should be adopted as a model by the Federal Government for our common defense at every point where pestilence may be imported.

National Board of Health. The importance, indeed the necessity of a National Board of Health organization will be appreciated when it is remembered that the present laws refer almost entirely to quarantine in time of epidemics or threatened epidemics, such laws being carried into effect by the Marine-Hospital Service through the Treasury Department. Every important power in Europe has its chief sanitary bodies independent of the army and navy. In this country, according to our form of government, there are sanitary duties that can and should be performed only by municipalities, and there are duties, especially in time of epidemics, that cannot effectually be performed by cities, but should be looked after by the State, and thus, in like manner, when the States are unable to accomplish what is necessary, then the National Government should do it. This is not the case as the law now stands. Two years ago, at the meeting of this Association held in the city of Washington, a bill was proposed and recommendations were made to the effect that a Minister of Health be created, who should be a Cabinet officer. In the recent legislation by Congress, this bill, though pending, was entirely ignored. At the last meeting of the American Public Health Association, held in the City of Mexico, the Committee on National Health Legislation recommended the appointment of a National Health Bureau and a Commissioner of Health, who should be the *chief sanitary officer* of the United States; said bureau and commissioner (sanitary) to be independent of the Medical Bureaus in Washington. The law that was passed by the recent Congress was a compromise between some of the bills pending in Congress, and, owing to the necessities then existing, the legislation was hurried, and, although in some respects in advance of what had existed before, still to the sanitarians and those interested in the sanitary welfare of the nation it is far from being satisfactory.

I learn that there will be an organized movement to secure legislation by Congress on the lines indicated, and I would respectfully suggest that a committee be appointed from this Association to coöperate with the committee appointed by the American Public Health Association and committees of other important bodies interested in securing the legislation needed.

The Journal of the American Medical Association. I am glad to be able to say that during the past year the *Journal* of this Association has shown marked improvement in its management. I am sure that we may confidently look for still further advancement in the near future.

Before closing this address, I beg to return my thanks to my fellow-members for the honor they have conferred

upon me by calling me to preside over the deliberations of this Association. When I recall the men who before me have filled this chair, and when I see around me those who fill high stations, which their attainments and a just appreciation of the public have given them, I am impressed with my own unworthiness and inability to meet the requirements of this office. For my shortcomings I beg your indulgence.

In the discussions that are to follow the papers that are read and the questions proposed, you will agree with me that it becomes us to display no bitterness or partisan spirit, but in debate, however earnest, very carefully to remember that our opponents are entitled to credit for equal honesty of conviction and purpose with ourselves, and the same desire to further the interests of this Association. The bigotry and intolerance we sometimes see in theologic debates, and the partisan rancor found in political contests, should have no place in questions that come up for consideration in an Association like this.

Let us strive to show to the world that our whole object is scientific work; and our high purpose, the good of mankind.

ORIGINAL ARTICLE.

CONSIDERATIONS CONCERNING ASIATIC CHOLERA.[1]

BY A. C. ABBOTT, M.D.,
FIRST ASSISTANT, LABORATORY OF HYGIENE, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA.

IN acknowledging the honor that has been done me by your invitation to address you, I do so with a full appreciation of the importance of the subject upon which I have been asked to speak.

The question that is at present of perhaps the greatest moment, not only to the medical men of this country, and of western Europe, but to the laity as well, is that involving the probable reappearance of Asiatic cholera during the coming summer. I have been asked to present to your notice some of the facts in connection with the bacteriology of this disease, and do so in the hope of contributing to a more complete understanding of the channels through which it is disseminated, and of the fundamental principles that underlie a rational prophylaxis against its spread. In order to do this, I must ask you to accept, without question, the modern teaching in relation to cholera, namely, that it is an infectious disease, depending for its existence and propagation upon a specific microörganism that is located within the intestinal canal of all individuals affected with this disease. This microörganism is now generally believed to be that described by Koch, commonly known as the "comma-bacillus" of Asiatic cholera. Though there were for a time after Koch's announcement certain objections to accepting his teachings in relation to the etiology of cholera, these have now practically disappeared, and the weight of opinion is incontestably in favor of the doctrine that he taught.

With the announcement that a definite *materies morbi*, most probably standing in causal relation to this disease, had been found, the attention of the medical world was at once directed to it, and on all sides efforts were made to become familiar with the characteristics of this organism and the means commonly employed for its identification. Perhaps nothing can give a better idea of the impression made by this contribution than the sudden and continuous increase of applicants for admission to the laboratory of which Koch was at that time director. So great was the demand that it became necessary, in order to satisfy it, to organize special courses of teaching, in which only the questions concerning cholera, its diagnosis, and the means of preventing it, were considered. This widespread interest in the subject naturally opened up channels through which many contributions that have added much to our knowledge of the subject have been received.

In so far as the morphological and cultural peculiarities of the organism are concerned, Koch left but little room for addition to his original description, but this represented only the foundation upon which was to be built a superstructure so rich in experimental data as to warrant our claiming acquaintance with the behavior of this organism under the manifold conditions of environment that it finds, not only when located within the intestinal canal, but when outside the body as well; and it is through investigations of this character that we receive the teaching upon which our plans of public quarantine and of domestic and personal prophylaxis are to be based.

In epidemics of cholera, manifestly, the danger against which we are to guard exists in the evacuations of the afflicted individual; and if the evacuations from each and every such individual were disinfected immediately upon being passed, it is safe to predict that the appearance of the disease in an epidemic form would be a thing unknown. Unfortunately, however, this precaution, simple as it is, is more often neglected than employed, and the consequences of such neglect are those that are causing the present agitation.

The question, then, that arises is: If these evacuations do not receive the proper attention at the hands of the attendant, are they likely, after having gained access to sewage or water courses, to cause a dissemination of the trouble?

Among the facts earliest demonstrated in connection with the organism of cholera, was, that it belonged to the group of bacteria known as facultative parasites, that is to say, it is an organism that is by

[1] Address delivered before the American Climatological Association, Philadelphia, May 25, 1893.

nature parasitic, but which can exist for a time outside the body of a living host, and lead a saprophytic form of existence. Perhaps the first observation that conclusively settled this point was the finding by Koch, in a water-tank, at Sahab Bagan, Calcutta, on February 8, 1884, of living comma-bacilli, which could be continuously demonstrated in this water up to the 23d of the same month. With this observation in hand, preparations were at once begun for determining accurately the conditions that favor the life and development of the organism in water, and though the results of these investigations are conspicuous for their lack of uniformity, they, nevertheless, demonstrate the possibility of this organism, not only retaining its vitality but multiplying, as well, in the purest of natural waters; and, contrary to what would *a priori* have been supposed, its growth is not only not favored by gross pollution of the water, but when the contamination is excessive the effect is to shorten the length of time that the cholera-spirillum may live in it. Among the first to take up this study was Koch himself, who states that in ordinary spring-water or well-water the organism of cholera retains its vitality for thirty days, whereas in the canal-water (sewage) of Berlin it died after six or seven days; but if this latter be mixed with fecal matters, the organism retains its vitality for but twenty-seven hours; and in the undiluted contents of cesspools it is impossible to demonstrate it after twelve hours. In the experiments of Nicati and Rietsch it retained its vitality in sterilized distilled water for twenty days; in Marseilles canal-water (sewage), for thirty-eight days; in sea-water, sixty-four days; in harbor-water, eighty-one days, and in bilge-water, thirty-two days.

In the experiments of Hochstetter, on the other hand, the cholera-spirilla in distilled water died in less than twenty-four hours in five of seven experiments; in one of the two remaining experiments they were alive after a day, and in the other after seven days.

In one experiment with the domestic water-supply of Berlin the organism retained its vitality for 267 days; in another for 382 days, notwithstanding the fact that many other organisms were present at the same time. There is no single ground upon which these variations can be explained, for they depend apparently upon a number of factors, which may act singly or together. For example, in general it may be said that the higher the temperature of the water in which these organisms are present, up to 20° C., the more active is their multiplication; the purer the water, that is, the poorer in organic matter, the more quickly do they die; whereas the richer it is in organic matter, up to a certain limit, the more rapid is their proliferation.

Still another point that must be considered in this connection is the antagonistic influences under which these organisms find themselves when placed in water containing organisms that are, so to speak, at home in water—the so-called normal water-bacteria; and Buchner has recently reported experiments to show that when suspended in fluids, and exposed to the direct action of the sun's rays, not only the cholera-spirillum and the bacillus of typhoid fever, but other pathogenic organisms as well, are robbed of their vitality in a relatively short time. Pettenkofer and his associates have also recently recorded observations, not as yet, however, complete, that indicate a part played by higher water-plants in diminishing the number of bacteria that may have gained access to water in which they are growing.

Though considerable variation is seen in the results of these experiments, they, nevertheless, agree in the single point, viz., that the cholera-organism can live, and does multiply, in natural waters; but there is no reason for believing that a single contamination of a water-course used for drinking-purposes, with a cholera or typhoid stool, is sufficient to cause a widespread epidemic of the disease through the multiplication of the organisms added, and it is more than probable that, when such an outbreak occurs, it is due to continuous pollution by relatively large quantities of this material. As water is one of the elements essential to life that is ordinarily used in common by all the individuals composing a community, it is probably the agent most frequently concerned in the propagation of epidemic outbreaks of diseases of which Asiatic cholera and typhoid fever may be taken as types.

In very recent times we have heard a great deal about the part played by water in the dissemination of disease, and while what we have heard is, in the main, true, it is only partly true, and in consequence, the public, while awake to the possible danger from this source, does not, I fear, quite appreciate the point or points at which the greatest danger is to be anticipated. The result is that precautions are taken in one direction, and neglected in another of equal or more importance. To define more clearly at what I am driving: many individuals will say with confidence that they have no fear of cholera entering their household, and will give as a reason that only boiled water is drunk, but if the individual is asked if only boiled water is used in washing his green salads, or for rinsing his milk jug, or if he is certain that boiled water is employed in the manipulation of the dairy from which he receives his milk-supply, the probabilities are vastly in favor of his reply being in the negative. The danger is not alone in the drinking of waters polluted by disease-producing elements, but also, and pro-

bably to a greater extent, in the general use of such water about the household. A very vivid example of the part that polluted water may play in the production of diseases, even though it be not drunk, is the outbreak of typhoid fever in the Third Brandenburger Regiment, described by Gaffky. Every source of infection was excluded except a pump, the water of which was used in rinsing dishes, beer-mugs, etc. Investigation showed that the well of this pump was in direct connection through the soil with a privy-pit, a short distance away, into which the evacuations of a typhoid patient had some time previously been thrown. As stated, the water from this pump was not used for drinking-purposes, but was employed only about the scullery.

A relatively small amount of water used in the average household goes for drinking-purposes, the most being used for kitchen and bath purposes, and of that employed in the kitchen a large amount is subjected to the disinfecting influence of heat. A certain proportion, however, greater than that used as drink, is not heated, but is employed for rinsing, diluting, etc., and in one way or another comes in contact with food-stuffs, some of which are rendered free from danger through cooking, while others come to the table in a raw state. The food-stuffs from which the greatest danger in this connection is to be feared are milk and salads that are used in an uncooked condition. The rinsing of a milk-jug with water consumes ordinarily far more water than the average individual takes at a draught, and if the water be but very slightly polluted with disease-producing organisms, the amount taken as drink may not be sufficient for the production of disease, but if a single pathogenic germ adheres to the sides of the vessel that has been cleansed for the reception of the milk, it rapidly multiplies into many thousands after the milk has been received. Unpleasant as this thought is, it is, nevertheless, one that we cannot ignore. Though only hot water may be employed in the kitchen, there is still the possibility that the milk supplied from the dairy may at the time of delivery be acting as a culture-medium for the organism against which efforts at home are being directed. This need not, of necessity, be due to dishonest dilution of the milk with water, but may arise from the water with which the milk cans were rinsed, and in this connection dairymen should under no circumstances ship their milk in cans that have not been thoroughly *scalded immediately before the milk is placed in them.* In times of epidemics of diseases of this character it is neither wise nor safe to use milk that has not been subjected to the action of heat, either by boiling or steaming, and though prejudice exists, particularly in this country, against the use of cooked milk, it is, nevertheless, our duty to recommend it.

Koch's experiments, and more recently those of Uffelmann, have demonstrated that the comma-bacillus is not robbed of its vitality by freezing, and the investigations of Fraenkel in Germany, and of Prudden in this country, have shown that natural ice may contain anywhere from a few hundred to several thousand bacteria per cubic centimeter. While the bulk of these bacteria are ordinary, innocent saprophytes, there is, nevertheless, a possibility of ice being a source of danger. I do not mean to discountenance the general use of ice, but rather the putting of natural ice *into* water to be drunk.

Still further, in this connection, is a consideration of domestic water-filters. While the results obtained by their use are desirable from an esthetic standpoint, they nevertheless furnish a false sense of security. The best of them are reliable for only a few days, 4 or 5 at the most, and unless they are properly cleansed by scrubbing and "burning out" the condition of the water, from a bacteriological standpoint, after this period is far worse than that of the unfiltered water. When filters must be used, the water to be absolutely safe, should be boiled *after* filtration and not *before*, as is often the practice.

As the danger against which we are to guard in cholera exists in the evacuations of afflicted individuals, it is manifest that by careful attention to these matters we have in our power the means *par excellence* for limiting its spread. A great deal is said and written as to disinfection and disinfectants, and just now the makers of these preparations are busy preparing for an active trade in the near future. Fortunately, the organism causing the disease is among the least resistant of any of the known pathogenic bacteria. It does not form spores; it is highly sensitive to the action of acids and alkalies; and it is killed in five minutes when cultures of it are exposed to a temperature of 65° C. From this it is plain that it is easily within the reach of all those concerned in the treatment or care of cholera-patients to render the evacuations of these patients entirely free from danger without the employment of complicated or uncertain processes.

The simplest and at the same time the most reliable disinfectants for the stools of cholera-patients are chlorid of lime, milk of lime, and boiling water. A one per cent. solution of good chlorid of lime has been shown to destroy the cholera-spirillum in feces in ten minutes. It should be made up as a two per cent. solution and added to the evacuations volume for volume. Milk of lime, ordinary fluid white-wash, when added to these evacuations until the entire mass reacts distinctly alkaline completely disinfects them in one hour. *Boiling hot* water added to these stools, in the proportion of three parts of the water to one of the evacuations, renders them free from danger in ten minutes.

When possible, the disinfection should take place as soon as the stool has been passed, but when this cannot be done, the vessel containing the evacuation or vomit should never be allowed to stand either inside the room or anywhere else uncovered. The reason for this is that flies are known to carry infection from these sources, and it is not improbable that food-stuffs have been infected through this agency. Uffelmann found living cholera-spirilla upon a fly two hours after it had come in contact with a fluid culture of this organism.

There is still another point in connection with the dissemination of cholera, viz., the possibility of its being carried from one locality to another in clothing, baggage, and effects generally of persons who have themselves recovered from the disease, or who have been in places in which the malady was prevalent. Have we any experimental data that may serve to shed light upon this part of the subject? The experiments of Koch and of Kitasato are perhaps the most reliable.

When completely dried, according to Koch's experiments, cholera-organisms do not retain their vitality longer than twenty-four hours, but by others their vitality is said to be destroyed by an absolute drying of three hours. In the moist condition, as in artificial cultures, their vitality can be retained for many months, though repeated observations lead us to believe that, under these circumstances, their virulence is diminished. According to Kitasato they retain their vitality when smeared upon thin glass cover-slips and kept in the moist chamber for from 85 to 100 days, and for as long as 200 days when deposited upon bits of silk thread.

It is hardly probable that, as dried upon clothing, the drying is absolute, and we see from the experimental data that in this condition the organisms may retain their vitality for a sufficiently long time to again give rise to the disease when favorable conditions are present. Fortunately, as has been stated, the organism is markedly susceptible to the influence of heat, and it is therefore a matter of but little difficulty to render such clothing free from danger. For large quantities of clothing, as one finds in the effects of suspected immigrants, arrangements should be made for conducting the process of disinfection upon a large scale. Properly equipped steam disinfection chambers should be provided, and these should be under the management of individuals who have been taught the proper means of obtaining the best results from their employment.

In hospitals and in private families the same end can be obtained by the use of hot water. An ordinary wash-boiler, filled with boiling water, into which the soiled bed-clothing and underclothing can be placed *immediately that they are removed from the bed or patient*, not only serves the purpose, but serves it just as well as would a more elaborate apparatus.

The question concerning the disposal of the dead is one upon which some discussion has arisen, and as it is of no small importance, it might be of interest to see what experiment has taught us in this connection. In his experiments upon the destiny of pathogenic bacteria in the dead body, von Esmarch was unable to detect later than five days after death living cholera-spirilla in the body of a guinea-pig that had died of the experimental form of the disease; and as a result of experiments performed in the Imperial Health Bureau at Berlin it was found that the bodies of guinea-pigs that had died of cholera induced by Koch's method of inoculation contained no living cholera-spirilla when exhumed after having been buried for nineteen days in wooden boxes, or for twelve days in zinc boxes. In a few that had been buried in moist earth, without having been encased in boxes, when exhumed after two or three months, the results of examinations for cholera-spirilla were likewise negative.

There does not seem, therefore, to be any objection to the burial of the bodies, providing the interment does not take place in a locality where a spring or water course could be directly contaminated; indeed, on the contrary, this method of disposing of infected materials generally is second to cremation only in its requiring a longer time for the accomplishment of the same end.

Protective Inoculations.—In this period of protective inoculation it is not surprising that efforts have been made to discover means of immunifying individuals against the possible infection of cholera by means of vaccination. Conspicuous in this field of research have been Gamaleia, Pfeiffer, Haffkine, and Klemperer, but thus far little has been done to prove protection for human beings. The experiments that have been made upon smaller animals have, in a number of instances, offered a favorable outlook, but the difficulties attending their successful employment upon human beings are, I think, too great to warrant the anticipation of their general adoption.

From what has been said we see that the difficulties attending the destruction of the infective agent of Asiatic cholera are by no means so great as those that stand in the way of preventing its invasion through the manifold portals that are open to it. In the first instance Nature does much in the way of limiting the life-period of this organism, but often by no means enough to admit of this limitation coming into play before a great deal of damage has been done. As to the part that we can take in this direction I shall limit myself to these fundamental precautions, viz., if cholera is not already in the household, much can be done to prevent its invasion

by total abstinence from all uncooked food or drink; if cholera is present, we can rest with an easy conscience if each and every evacuation, all vomited matters, and all soiled underclothing and bed-clothing are disinfected, by any of the methods recommended, as soon as they are passed or removed from the patient, for we shall then know that all has been done that can be done by us as individuals in preventing the spread of the disease to those not affected.

CLINICAL MEMORANDUM.

CYST OF PANCREAS; ABDOMINAL SECTION; RECOVERY.

BY R. EMMETT GIFFEN, M.D.,
SURGEON-IN-CHIEF, ST. ELIZABETH HOSPITAL; COLONEL AND SURGEON-GENERAL N. G. NEBRASKA, LINCOLN, NEB.

MRS. M. L., married, twenty-eight years old, came to me presenting an abdominal tumor that was said by her attending physician to be an abscess of the abdominal wall. On inspecting the abdomen I found it thoroughly painted with iodin, which had been used for several months. There was a history of excruciating pain in the abdomen for two years. The upper part of the abdomen was much enlarged, and on palpation a slightly movable tumor could be detected between the umbilicus and the ensiform cartilage.

The pain was constant, and worse when the woman would lie down than when standing or walking. It was also increased by the taking of food, which caused nausea, but no vomiting. The stomach could be mapped out below the tumor, as low down as the umbilicus.

I advised abdominal section, and after three days of preparatory treatment I opened the abdominal cavity, and found uterus and tubes in normal condition. Kidneys, gall-bladder, spleen, and meso-colon were healthy. Extending the incision above the umbilicus, the stomach protruded. Passing my hand behind the stomach I found a cyst of the pancreas. After evacuating over three quarts of fluid, I shelled out the cyst-wall down to the body of the pancreas, pulled it up, attached it by sutures to the abdominal wall, cutting off most of the cyst-wall, and packed the wound with iodoform-gauze. Hemorrhage was profuse, but by tying all of the vessels with catgut ligatures I succeeded in controlling it, put in drainage-tube, and then closed the abdominal cavity.

The patient rallied nicely. Twenty-four hours after the operation there was no rise of temperature. I removed the gauze and injected the cavity with tincture of iodin. This was followed by slight rise of temperature to 99.5°.

Forty-eight hours after the operation a slight discharge of pus set in, which continued for four days. The patient now commenced to ask for something to eat, stating that it was the first time for four months that she felt hungry. There was no pain and no distress. The woman steadily continued to improve. Nine days after the operation the stitches were removed, the wound having healed, except where the cyst-sac had been attached to the abdominal wall.

Three weeks after the operation the patient was up and walking around. She had gained five pounds in weight, feeling better than for more than a year. Appetite and digestion were improved. Three months after the operation the fistula had entirely healed and the patient was in perfect health.

MEDICAL PROGRESS.

Eclampsia in Children Induced by Hernia of the Cecum in the Inguinal Canal.—FEURER (*Corr.-bl. f. Schweizer. Aerzte*, Jahr. xxiii, No. 9, p. 321) has reported two cases of non-incarcerated hernia of the cecum in the inguinal canal in children, attended with convulsions and, in one case, terminating fatally. The first case was that of a child, six months old, in which a right-sided inguinal hernia had been observed from the sixth week. A truss had been worn, but failed of its purpose. The hernia would occasionally escape and be irreducible for days, and then finally return spontaneously. There had never been symptoms of incarceration. On one occasion the hernia could not be reduced, and symptoms of obstruction appeared, together with convulsions. Herniotomy was decided upon, but during the inhalation of chloroform the hernia was reduced by taxis. A short time later the child was again seized with convulsions, which, it was noticed, usually occurred before the bowels were moved and gas was passed, and in one paroxysm death took place, in the absence of symptoms of obstruction. Upon post-mortem examination the vermiform appendix was found in its entire length in the inguinal canal, with its extremity adherent to the testicle. There was no evidence of inflammation or of constriction of the bowel. The second case occurred in a child, five months old, likewise with an inguinal hernia that had been observed from the sixth week. For some time convulsions had occurred at the time of stool. Although the hernia was readily reducible, the experience of the previous case led to the performance of a radical operation. In the hernial sac were found the appendix, which had formed numerous adhesions, and the cecum. The child recovered, and the convulsive seizures did not again occur.

Pulsatile Exophthalmos.—At a recent meeting of the Société de Chirurgie of Paris, PICQUE (*L'Union Méd.*, 1893, No. 55, p. 657) reported the case of a man, sixty years old, who was run over by a carriage and suffered a fracture at the base of the skull. Hemorrhage from nose and ears continued for three or four days, when a roaring noise became perceptible upon the left side of the head. In a short time the left eye became prominent, with impairment of vision. In the absence of pulsation it was thought that a phlegmonous cellulitis had taken place about the globe; but puncture failed to disclose the presence of pus. After the lapse of a month, however, pulsation appeared, accompanied by thrill, and the diagnosis of arterio-venous aneurism, involving the internal carotid artery and cavernous sinus, was immediately reached. The condition of the patient forbidding ligature of the carotid artery, compression was employed, with results that were ultimately successful. In this case, as in others, the aneurism formed on the side opposite to that which received the traumatism and on which the fracture occurred.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment. When necessary to elucidate the text, illustrations will be provided without cost to the author.

Address the Editor: GEO. M. GOULD, M.D.,
1004 WALNUT STREET,
PHILADELPHIA.

Subscription Price, including Postage in North America.

PER ANNUM, IN ADVANCE . . . . . $4.00.

SINGLE COPIES . . . . . 10 CENTS.

Subscriptions may begin at any date. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made, at the risk of the publishers, by forwarding in *registered* letters.

Address, LEA BROTHERS & CO.,
Nos. 706 & 708 SANSOM STREET,
PHILADELPHIA.

SATURDAY, JUNE 10, 1893.

THE WORK OF AMERICAN MEDICAL ORGANIZATIONS.

THE current and the preceding issues of THE NEWS have largely been devoted to recording the proceedings of those important medical associations that are now holding their annual meetings. To report the original papers and discussions in full is beyond the scope of a weekly periodical, but by means of a well-trained corps of special reporters and the kindly assistance of the presiding officers of sections, THE NEWS is able to present a condensed and interesting narrative of the transactions of each day, while the free use of the telegraph lends the added attraction of very prompt presentation. These journalistic methods necessarily involve a very considerable outlay, but in incurring such expense THE NEWS feels that it is but performing its duty to its subscribers, who weekly look to it for a full and prompt story of all that goes on in the world medical.

Among the vast array of papers will be found a good many that merit special attention, as detailing the results of original thought and observation, and that do great credit to their authors and to the bodies whence they emanate.

EDITORIAL COMMENTS.

Dr. George M. Sternberg, the new Surgeon-General of the United States Army, was born June 8, 1838 in New York. He was appointed Assistant Surgeon in 1861, Captain and Assistant Surgeon in 1866, Major and Surgeon in 1875, Lieutenant-Colonel and Deputy Surgeon-General in 1891. He was brevetted Captain and Major "for faithful and meritorious services during the War"; and Lieutenant-Colonel "for heroic conduct in the performance of duty at the Battle of the Clearwater, Idaho," in 1877. Dr. Sternberg was a member and the secretary of the Havana Yellow Fever Commission of the National Board of Health in 1879; delegate from the United States to the International Sanitary Conference at Rome in 1885. In 1887 he was detailed, by direction of the President, in pursuance of an act of Congress, to make investigations in Brazil, Mexico, and Cuba relating to the etiology and prevention of yellow fever. In 1892 he was appointed Consulting Bacteriologist to the Health Officer of the Port of New York by authority of the War Department, and in compliance with the special request of the Health Officer of the Port of New York and the Advisory Committee of the New York Chamber of Commerce. He is a member of many learned and scientific bodies and has contributed largely to medical literature. By virtue of his scientific attainments and original investigations, as well as of active service in the field, the appointment of Dr. Sternberg will receive the cordial approval of the medical profession. The country, the President, and Dr. Sternberg are to be congratulated on a deserved promotion.

The Nystagmus of Dyspnea.—FRENKEL (*Lyon Médical*, 1893, No. 20, p. 43) has observed a form of nystagmus in conjunction with dyspnea in rabbits, as a result of injections of urine for purposes of experimental observation. The ocular movements were sometimes lateral, sometimes vertical, and synchronous with the respiratory movements. The observation is particularly interesting in connection with a form of Cheyne-Stokes nystagmus described by Bullard and Wentworth (*Boston Medical and Surgical Journal*, No. 13, cxxvii, p. 301).

Expert Medical Testimony.—Dr. Landon Carter Gray, of New York, proposes a plan that will place the expert testimony of medical men in suits at law upon a useful, intelligent, and impartial basis. He recommends the selection by the presiding judge of medical advisers to sit with him on the bench in trials that do not need juries. In cases tried by jury there should be a conference of all of the medical experts.

Pensions for Physicians' Widows.—A proper movement has been undertaken in France, where it is proposed to place the widows of medical men who die during an epidemic, while engaged in their professional duties, upon the same footing as widows of officers who die upon the battlefield, with the intention of obtaining for the one the same compensation as that provided for the other.

Dr. W. P. Northrup, for many years pathologist to the New York Foundling Hospital, has been elected to fill the vacancy on the board of visiting physicians caused by the death of Dr. Charles C. Lee.

ASSOCIATION OF AMERICAN PHYSICIANS.

Eighth Annual Meeting, held at Washington, May 30, 31, and June 1, 1893.

(Continued from page 614.)

SECOND DAY—MAY 31ST.

THE Discussion on Myxedema was opened by a paper by Dr. KINNICUTT, which was read by DR. THOMPSON. The view of Horsley, that the thyroid has a hemopoietic and a mucin-excreting function, is not accepted as proved. Clinical and pathologic observations show that removal or atrophy of the thyroid results in the development of the cachexia strumipriva or of myxedema. Up to the present time seventy-six cases of myxedema have been treated with a glycerin extract of the thyroid gland. It has been shown that just as good results can be obtained from feeding the raw thyroid.

To illustrate the clinical history a typical case was reported in elaborate detail. The pulse, temperature, respiration and excretion of urea were all increased under injections of thyroid extract. Great improvement resulted.

DR. JAMES J. PUTNAM reported three cases of myxedema successfully treated by thyroid preparations of different kinds. One was that of a woman in middle life who had had the disease for upward of fifteen years in a pronounced and typical form. The treatment by injection was begun in July, and the improvement began to show itself in two weeks. She is now practically well, and instead of being bald, as before, she has a dense growth of hair.

The morbid symptoms that appear during the thyroid treatment are thought to be due not to the extract itself, but to the rapidly changing condition of the heart and bloodvessels, and perhaps also to the rapid absorption of substances from the tissues.

The second case was in a woman in whom myxedema appeared at the menopause, and is especially interesting because of the family history, the rapidity of improvement, and the fact that for several years previously the thyroid had been enlarged (as it still is) and tachycardia had been present.

The third case was regarded as important on account of a history of severe headache, associated with atrophy of both optic nerves. This case brings up the relation of myxedema to akromegalia.

It is not believed that the relationship of myxedema and exophthalmic goiter is at all close. It is not probable that exophthalmic goiter is due to enlargement in the same sense that myxedema is due to atrophy of the thyroid. Certain forms of obesity, however, stand nearer, perhaps, to myxedema, which in a modified form is perhaps more common among elderly people than has been supposed.

There is a similarity between exophthalmic goiter and the first stage of cachexia thyreopriva. The results of partial thyroidectomy (which appears to have been so successful in partially relieving the symptoms of exophthalmic goiter) form an argument of value in favor of the thyroidal origin of that affection; but the question can by no means be decided positively. The theory that the symptoms are due to excessive or vitiated thyroid secretion, though important, still lacks proof.

It is difficult to define the condition of the thyroid necessary to cause myxedema. Sometimes the functions of the gland seem to be only temporarily inhibited. It is a question whether a small part of the gland is functionally equivalent to the whole.

Recent pathologic observations are conflicting regarding the compensatory enlargement of the hypophysis cerebri after thyroidectomy, and regarding the function of the hypophysis.

DR. M. ALLEN STARR, of New York, reported three cases of myxedema successfully treated with thyroid extract. One was in a married woman, forty-six years old, in whom myxedema developed after the birth of a fifth child.

Improvement began ten days after the institution of treatment with the glycerin extract, and has been steady; but the mental improvement has been greater than the physical. The maximum dose was equivalent to one-half a gland.

The second case was in an unmarried woman, twenty-two years old, with a neurotic family history. Hallucinations and delusions, with profound melancholy, appeared after a severe shock. After several months of treatment with thyroid extract the mental condition greatly improved. Insomnia, however, remained.

The third case was in a married woman, forty-six years old, with paralysis of the right side of the face. Grave secondary symptoms appeared upon the institution of treatment with thyroid extract, but afterward the improvement was marked, both mentally and physically.

All three patients had hallucinations of sight and one of hearing. Two had delusions, and all had suicidal intentions. In all, the symptoms resembled those of mild dementia, with partial loss of will-power.

DR. W. GILMAN THOMPSON reported a case of myxedema. The patient was a woman, forty-four years old. The disease began twelve years ago, with swelling of the face, dryness of the skin, weakness, drowsiness, and alopecia. The symptoms have slowly progressed. There have been visual and auditory disturbances and loss of memory, but no hallucinations. The mental condition was dull, and the patient was drowsy, listless, and weak. There was slight albuminuria. In treatment a glycerin extract of thyroid gland was employed. There has been steady improvement in both the physical and the mental condition.

DR. SHATTUCK referred to the case of a young woman with mental exaltation. Under thyroid injections the condition of the skin improved, but the mental condition changed to one of depression, with marked suicidal tendency. For a time treatment was omitted. Subsequently a desiccated extract was used, but without any improvement. The case was undoubtedly one of myxedema, but the therapeutic test is wanting.

A second patient complained of excessive lachrymation and nasal discharge, with looseness of the bowels. The desiccated extract was tried, but had to be given up on account of pains in the legs and anginoid attacks. Under a smaller dose, however, the improvement has been marvellous, and the dose was well borne. There is great danger in over-dosage.

DR. WELCH said that in dogs the extirpation of part of the thyroid gland is followed by a so-called hypertrophy, but the tissue formed bears no resemblance to

the original gland. Again, this same alteration occurs as the result of interference with the gland in various ways. Gradual removal has been practised without the production of thyroid symptoms.

DR. PUTNAM emphasized the statement that the appearance of myxedema may be simulated by that of chronic nephritis, and suggested that elderly, obese persons, with slight edema, may be benefited by thyroid treatment.

DR. STARR advised that in case of apparent failure the dose should be gradually increased.

DR. WILLIAM OSLER read a paper on "Sporadic Cretinism in the United States." He would limit the designation of cretinism to a form of idiocy associated with or based upon absence of the thyroid gland. In sporadic cretinism the condition reaches its height at about the fourteenth year. There are three grades of cretinism, depending upon the mental state. The important criteria are the stunted growth, the condition of the skin and connective tissue, the mental condition, and the condition of the bones.

In the sporadic cases the thyroid is usually absent. The conclusion was announced that cretinism is mistaken for various forms of idiocy, and that the disease is very rare.

Cretinism occurs where goiter is common. It does not occur endemically in this country. The statement of Hirsch as to the prevalence of goiter in Vermont and elsewhere is not borne out by present investigations. Goiter only prevails extensively in the neighborhood of Kingston, Ontario.

Thyroid extract benefits cases of sporadic cretinism when seen in the first few years. Photographs were exhibited of several cases—one in a child of three years, one in a girl of nineteen.

The photograph was exhibited and the notes read of a rare case of operative myxedema in a patient of Dr. McGraw, of Detroit.

DR. E. L. TRUDEAU exhibited "Rabbits under Tuberculin Treatment." He said that experimental tuberculosis can be cured by means of tuberculin, but the results are very variable, depending upon the number and virulence of the microbes employed in inoculating the eye. The permanency of the results is not yet established.

The bacillus of tuberculosis in birds is different from the bacillus of tuberculosis in man in being much easier of cultivation. It can be cultivated in the absence of oxygen, and in general is not fatal to guinea-pigs and rabbits. Rabbits were also exhibited in which immunity had been successfully established by vaccination, but it could not be said whether the result would be perfect or not.

DR. WELCH stated that of three rabbits sent him by Dr. Trudeau, none developed general tuberculosis. The animals treated with bacterio-protein became extremely emaciated and finally died. Here, then, was extensive caseous degeneration of the eye, but no general infection. The animal inoculated with the filtrate was cured.

DR. WHITTAKER stated that he has employed tuberculin continuously ever since he first obtained it. It relieved the depression of pulmonary tuberculosis more than any other agent. The effect continues until some complication arises in consequence of secondary invasion by pyogenic bacteria. The best effects of tuberculin are seen in members of tuberculous families. Tuberculin does harm when complications exist. Individuals cured by tuberculin do not suffer relapses. Moreover, a cure in early cases can be achieved in two or three months.

DR. THEOBALD SMITH read a paper on "Some Problems in the Etiology and the Pathology of Texas Cattle-fever and Their Bearing on the Comparative Study of Protozoan Diseases." He described a pear-shaped intra-corpuscular parasite which exhibits marked variations. In the acute fever the number of infected blood-corpuscles is small, rarely exceeding 2 per cent. The parasite is then fully developed. In the mild fever or in the relapse, the number of infected circulating corpuscles is, as a rule, much greater and may reach 50 per cent. The micro-parasite is always in a very early stage. This is explained by a partial immunity of the infected animal acquired in the acute attack, by virtue of which the development of the intra-corpuscular parasite is retarded. In the original attack there is a rapid destruction of red cells, amounting to half a million per c.mm. in twenty-four hours.

An important fact is the indefinite persistence of the parasite in small numbers in the blood of insusceptible animals. Such blood, however, is capable of producing the acute disease in susceptible animals. In other words, a complete symbiosis between an otherwise fatal parasite and the host seems to be compatible with and perhaps necessary to immunity.

Four forms of the same parasite were described, varying from a minute coccus to a pear-shaped body. The disease is probably transmitted exclusively in nature by an ecto-parasite.

The paper by DR. H. C. ERNST, of Jamaica Plains, on "A New Pathogenic Bacillus," was read by DR. WELCH.

The bacillus described is a chromogenic and pathogenic form, isolated from the pericardial fluid in a case of pericarditis. The bacillus of tuberculosis is believed to be associated with it. The bacillus resembles the bacillus pyocyaneus, but has marked differentiating characteristics.

DR. A. C. ABBOTT, of Philadelphia, read a paper on "The Results of Inoculating Milch-Cows with the Bacillus Diphtheriæ."

He referred to the work of Klein, who declares that milch-cows are susceptible to infection by the bacillus diphtheriæ, and that this organism may be detected in the milk of cows that have been inoculated subcutaneously with cultures of the diphtheric organism.

Dr. Abbott has thoroughly gone over the subject again and is unable to confirm Klein's results in any particular. He expressed the opinion that much harm has been done by the extensive publication of Klein's views.

Dr. Welch stated that he was prepared for Dr. Abbott's results, as it is incredible that the diphtheric bacillus should produce such a general infection as Klein has described. It would be interesting to know whether the cat-pneumonia described by Klein as due to the diphtheric bacillus is really due to this organism.

DR. W. T. COUNCILMAN, of Boston, read a paper on "Gonorrheal Myocarditis." He referred to the demonstration of the pathogenic properties of the gonococcus. The secondary results of gonorrhea, especially so-called

gonorrheal rheumatism, were described. A few cases have been reported in which gonococci were found in the joints and fluids.

Dr. Councilman reported the case of a man who was admitted to Boston Hospital, and in which the left knee began to swell ten days after the discharge from the urethra started. Subsequently pain in the chest was complained of, and, not many days afterward, the man died suddenly. The temperature throughout did not exceed 99°. After death the opposed surfaces of pericardium presented dense, membranous masses. The myocarditis was almost confined to the left ventricle. Gonococci were found in the urethra and in the joints. In hardened specimens gonococci were found in the epithelium, particularly in pus-cells on its surface. The myocardium, near the endocardium, presented evidence of degeneration, and in the left auricle, particularly, gonococci were found in immense numbers—none was found outside of pus-cells.

The secondary lesions of gonorrhea are regarded as due to metastasis of the gonococcus, and not to a mixed infection.

DR. LOOMIS stated that he had had a patient with gonorrhea who developed endocarditis during the fourth or fifth week; but there was also diphtheria in the house, with which the man also became infected.

DR. STARLING LOVING, of Columbus, Ohio, read a paper on "Acute Follicular Tonsillitis," which he defined as an acute febrile, specific, contagious, infectious disorder, wholly different from, but in some respects resembling, diphtheria. He thinks the disease due to pyogenic bacteria, which may be found in all cases in the affected crypts of the tonsils. He proposes the name "Tonsillar Fever."

DR. D. W. PRENTISS, of Washington, read a paper on "Sarcoma of the Lung."

He reported a case in which the patient was a male, fifty-one years old, who, four years before, had had sarcoma of the testicle. The diagnosis was made before death by microscopic examination of a fragment obtained by paracentesis.

The disease may be mistaken for tuberculosis or syphilis. In the present case the patient was treated for several months for tuberculosis.

DR. THEOBALD SMITH, who made the examination, explained that the fluid contained small gelatinous masses, in which were cells resembling leukocytes, and single and branched capillaries. He suggested, therefore, that there might be carcinoma.

DR. TRUDEAU referred to a case in which inoculation-experiments were employed, and the diagnosis of carcinoma was reached by exclusion.

THIRD DAY—JUNE 1ST.

DR. JAMES C. WILSON read a paper on "Pulsating Pleural Effusions," which is to appear in a subsequent number of THE NEWS.

DR. OSLER said that since reporting in 1888 a case similar to the first of Dr. Wilson's, he has seen another, in a young woman, in whom a left-sided pleural effusion developed after the performance of celiotomy. The pulsation extended from the sternum to the axilla, and from the clavicle to the fourth rib, and was quite as forcible as in any aneurism. Skoda's resonance was present in the first two interspaces, and dulness below. The exudate was serous. Pulsation ceased when the fluid was withdrawn, and the patient recovered. Subsequently she returned with a large abdominal tumor—a large, strangulated spleen with necrosis—and again recovered after operation.

DR. LOOMIS remarked concerning the treatment, that the earlier a free opening is made the better. In long-standing cases resection with packing is the better treatment.

DR. FITZ agreed as to the necessity for free drainage, but expressed the view that this may be accomplished without packing—in some cases, at least.

DR. OSLER also expressed himself in favor of free opening and packing with gauze, at least for a time, in cases of simple empyema.

DR. WILSON said that at the time of his first two cases the current method of free opening and packing had not been made familiar. The drainage-tube had given good results. Our knowledge of empyemata is not sufficient to allow of dogmatism in treatment. Some cases are capable of management by aspiration and the drainage-tube. This is especially true of the empyemata of children, which are due mainly to the pneumonia-coccus.

DR. A. L. MASON, of Boston, read a paper on "Subphrenic Abscess, with Especial Reference to Cases which Simulate Pneumothorax." He pointed out that abscesses beneath the diaphragm may arise *in situ*, as a sequel of disease of contiguous organs, stomach, spleen, liver, or intestine, or they may extend from the region of the kidney or cecum, in the latter case being sometimes retroperitoneal. If such an abscess contains air, there is most likely communication with some part of the gastro-intestinal tract, usually in consequence of perforating ulcer of the stomach, duodenum, or vermiform appendix. The collection may raise the diaphragm to the level of the third rib and give rise to phenomena resembling those of pyopneumothorax.

Subphrenic abscesses that do not contain air present the physical signs of empyema, which, indeed, may coexist through rupture into the pleural cavity. Such abscesses also occasionally break into the lung, especially when the primary condition is abscess of the liver.

A brief report of five cases was read, in two of which signs resembling those of pyopneumothorax were present. In two of these the cause was the perforation of a gastric ulcer; in one, the perforation of a duodenal ulcer; in one, the rupture of a perinephric abscess. In a fifth case the origin remained undetermined.

An air-containing abscess below the left leaflet of the diaphragm is almost always indicative of a perforating gastric ulcer; such an abscess below the right leaflet is indicative of a perforating duodenal ulcer, though appendicitis may likewise be the cause.

The prognosis depends almost entirely upon the efficacy of surgical treatment. One case in five has recovered. Those due to duodenal ulcer have been fatal.

DR. S. J. MELTZER, of New York, read a paper on "Subphrenic Abscess." He reached the conclusion that the primary cause of subphrenic abscess is, as a rule, to be found in the abdomen. He reported, however, a case in which such an abscess followed lobar pneumonia, and one other such case has been recorded. He looks upon metapneumonic pleurisy as a possible cause of

subphrenic abscess, the causative microörganisms of the former being carried in the lymph-channels below the diaphragm.

DR. OSLER briefly referred to several cases of subphrenic abscess. In the first case the abscess was secondary to appendicitis and simulated abscess of the liver. A correct diagnosis was made, and recovery followed operation. The second case was a left-sided pyopneumothorax subphrenicus, with resonance on percussion when the patient was on his back, but with dulness when the patient was on his side. The process was tuberculous, and death occurred from pulmonary tuberculosis. The third case resembled those of Dr. Metzler's, being apparently secondary to empyema. In two other cases the diagnosis was respectively hepatic abscess and empyema. The true conditions were discovered upon operation, and recovery followed.

DR. WELCH said that in the first case of Dr. Osler's the colon-bacillus was found in the pus of the abscess. This is not found, except when there is communication with the alimentary canal. The fact is of interest in the diagnosis. Dr. Welch expressed surprise that cases of peritonitis following pneumonia are not more common.

DR. FITZ said it would be better to consider these cases under the name of "subphrenic peritonitis." This leads more directly both to the true etiology and to the treatment. He referred to a case in which there had been some thoracic inflammation, and subsequently a pleural effusion, with a probable subphrenic collection of pus. A point in etiology is traumatism. Such cases are included under the head of cyst of the pancreas. They do not present true cysts, and are very amenable to treatment.

The paper of DR. JAMES TYSON on "Two Cases of Subdiaphragmatic Hernia," was read by title.

The following officers were elected for the ensuing year: President, Reginald H. Fitz; Vice-President, William Osler; Recorder, I. Minis Hays; Secretary, Henry Hun; Treasurer, W. W. Johnston; Representative on the Executive Committee of Congress of American Physicians and Surgeons, William H. Welch; Alternate Representative, M. Allen Starr; Councillor, John H. Musser.

AMERICAN SURGICAL ASSOCIATION.

Fourteenth Annual Meeting, Buffalo, N. Y., May 30, 31, and June 1, 1893.

FIRST DAY—MAY 30TH.

(Continued from page 614.)

IN the discussion of Dr. Senn's paper, DR. ROSWELL PARK, of Buffalo, expressed the opinion that the method might be practised with advantage when there is much displacement and difficulty in maintaining the fragments in position. In two or three cases he had used Volkmann's method of dovetailing the fragments together with advantage. In other cases he had used chromicised catgut or silkworm-gut, also with good results. In suturing the fragments through holes drilled through the bone, it is often difficult to bring the lower end of the suture around and tie it. It is easier to pass the suture around the bone by means of a modified aneurismal needle. It would seem that the application of the ferrule of Dr. Senn would require considerable disturbance of the soft parts and might give rise to local necrosis.

DR. F. S. DENNIS, of New York, said that he had been in the habit of drilling the bone, and always with success. In some cases small ivory pegs have been driven into the drill-holes. Sufficient attention has not been given to the practice of tenotomy in this connection. By this means muscular spasm is at once relieved, and the patient is made comfortable. By thus securing physiologic rest, the liability to non-union is reduced to the minimum. In simple fractures it is not a bad rule to divide the tendons at once.

There is no question as to the development of malignant disease in ununited fractures. Dr. Dennis has seen some fifty cases of sarcoma develop as a result of traumatism in bone, and these have usually been cases in which there has been some mobility of the fragments. Epithelioma has also been seen in cases in which there has been a sinus running down to loose bone.

The amount of disturbance of the part might be obviated by dividing the ferrule into two parts and securing these together after their application.

DR. DEFOREST WILLARD, of Philadelphia, remarked that at the Presbyterian Hospital of Philadelphia, Dr. Allis and himself have been using methods of direct fixation when there is great tendency to displacement. In order to facilitate the application of sutures, he has had made hollow drills, through which the suture can be readily passed. He has seen a number of cases of Gluck's ivory insertions, but in every case but one the ivory plug had been discharged or was in process of discharging.

The method of dovetailing referred to by Dr. Park is valuable. The fragments may be held together by the use of screws. Dr. Allis uses steel screws for this purpose, which can be removed later, if necessary.

The use of a plaster-of-Paris dressing is one of the most important elements in the treatment of compound fractures.

DR. G. MCLANE TIFFANY, of Baltimore, failed to see how the ferrules could be used with advantage in comminuted fractures, as their application would be liable to cause separation of some fragments that might otherwise unite. There is no method applicable to all cases, and often the method cannot be decided upon until the fragments are exposed. In cases in which there has been much loss of bone, the use of the ferrule does not seem applicable. It such cases the steel splint, with steel screws, has, in Dr. Tiffany's hands, been the only method of holding the fragments together. In compound comminuted fracture the fragments may be placed in position with the finger and held in place by the plaster-of-Paris bandage.

DR. M. H. RICHARDSON, of Boston, said that in most cases of ununited fracture treated by the application of silver wire, recovery follows satisfactorily. The same is true of the use of ivory pegs. Occasionally the application of the ferrule will prove of service. Dr. Richardson reported a case of transverse fracture of the humerus operated on several times by silver-wire sutures, but without securing union. In such cases, in which it is desirable to keep the bones from slipping transversely, the method of Dr. Senn will answer a useful purpose. In ununited fracture, with extensive loss of substance,

the periosteum and medullary cavity do not come in contact, and it is difficult to see how this is provided for by the method described.

DR. J. COLLINS WARREN, of Boston, had also operated on the case referred to by Dr. Richardson, but the lack of union was due rather to the condition of nutrition than to failure of mechanical appliances. The patient is five feet eight inches in height, and weighs 300 pounds. At the suggestion of Dr. J. J. Putnam, the patient had recently been put on the use of thyroid juice. During three weeks of treatment he had lost 10 pounds in weight, but the method had not been continued sufficiently long to determine what the ultimate result will be.

DR. N. SENN said that he did not protest against the use of external support; nor did he charge this with the production of permanent damage. He had alluded to continuous extension for six or eight weeks as being productive of such results. There is no method of direct fixation that will render external mechanical support unnecessary. All that he wished to overcome was the tendency to lateral displacement, and by such direct means to bring and hold similar anatomic structures in mutual contact. The angular deformity and rotation can be overcome by the use of plaster-of-Paris bandage.

DR. J. COLLINS WARREN, of Boston, read a paper on "Hypertrophies and Degenerations of Cicatrices and Cicatricial Tissues." He first traced the evolution of cicatricial tissue. Lymphatics are not usually found and nerves are rarely seen in scars. Scars rarely disappear entirely; they usually remain as fine white lines, or, if they have been stretched, as bands; scars grow in proportion to the rest of the body.

The most striking peculiarity of scar-tissue is its tendency to contract. During the healing process this acts in a beneficial way. It is also the cause of the most marked deformities. This contraction of cicatricial tissue is not due to any intrinsic contractility of the tissue itself, but to the absorption of new-formed tissue. Scars are not ordinarily painful, but they may become the source of pain by adherence to sensitive structures.

Among the most common pathologic conditions observed in scars is the hypertrophic condition known as keloid. True keloid is extremely rare. It seldom disappears. False keloid may develop in almost any part of the body.

Carcinoma not infrequently forms in cicatrices, usually after these have existed for several years.

Calcareous degeneration of a cicatrix has been reported. A common complication in the life-history of scars is suppuration, which may be due to re-infection, or to the awakening of spores that have long been dormant. A most common form of relapse is due to tuberculosis.

Every effort should be made to limit the development of scar-tissue. Animal sutures should be used if they are to be buried. Very superficial sutures should be used freely. The checking of the superabundant growth of granulations has been strongly recommended, as the contractility of the cicatrix is largely dependent upon the amount of granulation-tissue that becomes organized. For projecting scars, compression has been recommended. This will often relieve the redness, as well as the elevation. Unna advises friction with sand in the treatment of depressed scars. Pigmentation of scars from gunpowder may be removed by scrubbing with a nail-brush under ether. In older cases the particles of powder may be removed by the punch devised by S. J. Mixter for this purpose.

The treatment of true keloid is discouraging on account of the persistence with which it returns. If excision is attempted the incision should extend one or two cm. beyond the limits of the disease and into the muscular aponeurosis. Compression is recommended by many writers for the treatment of false keloid. As keloid is a connective-tissue structure, it is possible that an inoculation with the virus of erysipelas might produce absorption. It is doubtful, however, if such a powerful remedy would be justifiable. Skin-grafting, after the method of Thiersch, may be employed with advantage in case of broad and flat cicatricial keloids. A case was reported in which this method had been employed, and thus far (several months) there has been no return of the tumor.

DR. GEORGE R. FOWLER, of Brooklyn, stated that the fact that keloid more frequently follows wounds in which there has been much suppuration suggests a microbic origin. In regard to epithelioma developing in cicatrices, it was noted that it has a tendency to spread upon the surface and rarely passes into the depths of the tissues. In the treatment of this condition there should be early and radical extirpation.

DR. L. MCLANE TIFFANY, of Baltimore, said that in the Southern States keloid is exceedingly common, but he knows of it only as a cicatricial disease. He has never seen a case of so-called non-cicatricial keloid. In the negro the disease is prone to undergo retrogressive changes after the age of forty or forty-five years. The affection rarely occurs before the age of eight or ten years. In the white race it may be confidently expected that keloid will disappear or not make much progress after the age of twenty-five years. The case of a girl who, at the age of seven years, was severely burned on the face, breast, and arm, was reported eighteen months after the accident. The scar was of a bright-scarlet color, and half an inch in thickness, resembling a heavy plate of cartilage. The advice given was to let it alone. Twelve years later there was a white, perfectly mobile scar. Dr. Tiffany was inclined to think that operative measures in young persons, either white or colored, are unwise.

DR. M. H. RICHARDSON, of Boston, remarked that in cases of abdominal incision, it is important to bring the parts together so as to secure union by first intention. In open wounds that heal by granulation there is a great tendency to hernia.

DR. J. COLLINS WARREN said that the point that had impressed him was the absence of contractility in the scar-tissue, which formerly was believed to exist. It is absorption that causes the traction. The scar-tissue itself yields before pressure; therefore the importance of accurate coaptation, not only to make the scar small, but to have no scar at all, and to have regeneration instead of repair.

DR. M. H. RICHARDSON, of Boston, read a paper entitled "Surgery of the Gall-bladder." He stated that it is seldom possible to cure or even relieve malignant diseases involving the gall-bladder or gall-ducts. With a

few exceptions, operations are of questionable value in most cases of chronic obstruction to the flow of bile from causes other than stone.

A gall-bladder may be much enlarged; its functions may be entirely destroyed, and it may contain a large number of stones, in the absence of any symptoms. While it is justifiable to relieve this condition of simple dilatation, to avoid possible future complications, interference is not essential unless pain and local and constitutional disturbances be present.

Impaction of the common choledoch duct causes universal jaundice, which may lead to fatal cholemia. The gall-bladder and the biliary passages become distended. Perforation frequently occurs, with escape of bile into the peritoneal cavity, and death; or spontaneous cure may follow rupture into the intestine, the stone remaining fixed in the canal. At other times the stone makes its way by ulceration into the intestine, and permanent recovery takes place.

Operations on the gall-bladder and biliary passages should not be undertaken until every diagnostic means has been exhausted. Unnecessary explorations should be avoided. In some cases the presence of malignant disease, or other mortal organic disease, can be shown clearly enough to justify non-interference. The point recommended for exploratory incision is just to the right of the rectus muscle, opposite the tip of the cartilage of the tenth rib. An incision an inch and a half long is sufficient. If necessary, the opening may be continued upward along the border of the rectus muscle and outward parallel to the border of the ribs.

Gall-stones limited to the gall-bladder being the most frequent occasion for surgical interference, cholecystotomy is the most common of the surgical procedures about the liver. Normally the operation is a simple one. The gall-bladder may be sewed into the wound and incised at once, or its opening may be deferred a day or two. The so-called ideal operation, in which the opening in the gall-bladder is immediately closed, is the preferable one when practicable. When the gall-bladder is contracted, so that the fundus cannot be brought in contact with the abdominal wound, immediate incision, with drainage, and total extirpation are the alternatives.

Extirpation should not be attempted unless the gall-bladder can be easily separated from adjacent structures. Besides lessening danger at the operation, it shortens convalescence. Yet even after extirpation, drainage and gauze tamponage are necessary.

There are few conditions of the hepatic duct that admit of operative manipulation. In health, the duct cannot be catheterized. When dilated it may be explored through the gall-bladder. Stones impacted in the duct may at times be crushed; at other times incision is required. After apparent occlusion, the cystic duct at times becomes pervious as soon as the gall-bladder is opened, perhaps by subsidence of inflammatory stenosis from long-continued irritation of the stones.

Operations upon the hepatic and upon the common choledoch duct are indicated when stones become hopelessly impacted in either. The incisions may at times be closed by suture, but often this is impracticable. A rubber or glass drainage-tube should then be placed in the duct, with siphonage, and the whole protected with gauze. In no case of operation upon the biliary passages has death followed remotely or immediately as the result of biliary obstruction, and in no case has septic infection from this cause been observed.

In chronic organic, non-calculous obstruction, chronic and fatal cholemia may be expected unless the escape of bile either externally or internally can artificially be provided for. Anastomosis between the gall-bladder and duodenum is preferable, when possible. Deviation of the flow of bile into the colon seems compatible with health, and is often more feasible than the duodenal route. The anastomosis may be made by means of Senn's plates, or Murphy's buttons, or mechanical devices may be omitted altogether. The essential point is to have the opening large enough to insure permanency. If the gall-bladder cannot be used for anastomosis, the common duct may be isolated and introduced through a slit into the duodenum.

Operations upon the common duct by way of the duodenum may be practised under very exceptional circumstances.

Obstructions in the hepatic duct, above the point of junction with the cystic duct, admit of no relief, except occasionally by the formation of a fistula, although theoretically the duct above the constriction, if long enough, might be inserted into the gall-bladder.

The prognosis after simple exploration is good, although the mortality is considerable in advanced organic disease.

After cholecystotomies, extirpations, and operations upon the ducts, recovery takes place in a large proportion of the cases. In fourteen cases, including all methods of gall-stone extraction, Dr. Richardson has had two deaths: one from avoidable sepsis and the other from hemorrhage. In six exploratory operations there were two deaths, both cases of carcinoma.

In most of the cases there had been marked and long-continued jaundice. In none had hemorrhage been an important factor at the operation, and in but one had there been secondary hemorrhage. Hemorrhage is a real danger in cholemia, but its frequency and importance have been exaggerated.

DR. J. EWING MEARS, of Philadelphia, referred to the occurrence of symptoms simulating malarial fever in cases of gall-stone obstruction, and reported such a case, in which the stone was impacted in the common duct. The calculus was forced into the duodenum, and the obstruction was removed.

In case of contracted gall-bladder, when drainage by glass and gauze is required, a ligature could be applied to the duct and the gall-bladder be permitted to remain in place. In that way the danger of attempting to remove the contracted bladder may be obviated.

DR. WM. H. CARMALT, of New Haven, said that in 1886 he had performed ideal cholecystotomy in a case in which the patient had previously been operated upon for floating kidney, and in which it was believed that the condition was one of movable kidney. Instead, however, the gall-bladder was found distended with bile, from impaction of a gall-stone in the cystic duct. The obstruction was removed, the wound in the gall-bladder closed, and the organ returned to the abdominal cavity. The patient made a perfect recovery.

DR. T. A. MCGRAW, of Detroit, ascribed the liability

of the opening made in anastomoses between the gall-bladder and intestine, or between intestine and intestine, to contract, to separation of the mucous surfaces, with the formation of cicatricial tissue and subsequent contracture. To overcome this difficulty, instead of a simple slit in the gall-bladder, flaps are made and turned back, and the peritoneal surfaces united. Then these flaps are inserted into the incision in the bowel, and the edges of the incision in the gall-bladder are secured to those of the incision in the intestine. There thus results a projecting ring of mucous membrane through the intestinal opening.

DR. T. F. PREWITT, of St. Louis, referred to a case in which he had operated for floating kidney, and had found a distended gall-bladder. The lumbar incision was closed and the gall-bladder opened through the anterior abdominal wall. A stone was found impacted in the cystic duct. This could not be readily dislodged, and as the condition of the patient did not warrant prolonged operation, a fistulous opening was made. Subsequently a second operation was performed, with a view of getting rid of the stone. This could not be crushed, and needles had no effect upon it. It was finally removed piecemeal with the curet.

DR. STEPHEN H. WEEKS, of Portland, Me., reported a case of cholecystotomy in which the gall-bladder was found much contracted. It was incised, and a rubber drainage-tube, with gauze packing, introduced. The condition of the patient, which before operation had been critical, at once began to improve.

DR. DE FOREST WILLARD, of Philadelphia, exhibited a gall-bladder and a number of gall-stones removed on account of suspected malignancy. Since the operation (seven weeks) the patient has greatly improved, having gained thirty or forty pounds in weight. One stone, lodged in the duct, was gently forced into the duodenum.

SECOND DAY—MAY 31ST.

The morning session was held at the Buffalo General Hospital, where a number of interesting cases were exhibited to the Association.

At the afternoon session DR. C. B. NANCREDE, of Ann Arbor, read a paper entitled "Surgical Treatment of Cervical, Thoracic, and Abdominal Aneurism."

His conclusions were that in the treatment of cervical aneurism all methods should be supplemented by recumbency and diet. Proximal compression, when feasible, should always be tried, and, when the arterial coats are seriously diseased, should supersede ligation. Needling should supplement pressure when the case is progressing rapidly. Possibly it is advisable in all cases suitable for compression, and is certainly to be employed when this method fails in cases with highly atheromatous vessels. Proximal ligation, having been rendered much safer of late by the use of aseptic precautions, less absorbent ligatures, and the avoidance of all injury to the arterial walls by applying the stay-knot, is permissible when the arterial walls are relatively sound, until experience decides whether or not needling is superior in its results. As recurrence after proximal ligation almost certainly results from non-deposition of white thrombi and their maintenance in contact with the aneurismal wall, from lack of proper changes of its lining, needling is clearly indicated. When the location prevents proximal arrest of the blood-current, needling is the best operation; distal compression—rarely feasible—might possibly aid in the formation of thrombi.

For the reasons already given, although occasionally successful, the indications for the permanent introduction of such foreign bodies as wire, horsehair, etc., into aneurismal sacs are so much better met by needling that such procedures had better not be adopted. The modern revival of the older method of extirpation of aneurisms should not be attempted for spontaneous cervical aneurisms.

In the treatment of thoracic aneurism all methods should be aided by the employment of rest in bed and proper diet. The permanent introduction of foreign substances should not be practised. Needling should be tried, aided by distal compression when feasible during the use of the needles; if this fails, distal ligation should be resorted to. Distal interruption of the blood-current by simultaneous ligation of the carotid and subclavian arteries may be tried. Needling is indicated when complete or partial failure follows distal ligation.

In the treatment of abdominal aneurism all methods should include recumbency and diet. Needling, when possible without injury to the hollow viscera, is the most promising plan. Proximal or distal compression may be tried with or without needling, but to be effectual must be done under anesthetics. The permanent introduction of foreign bodies into the sac is inadvisable.

DR. JOS. RANSOHOFF, of Cincinnati, stated that in one case of aneurism at the root of the neck he had transfixed the sac with two needles, which were allowed to remain ten or twelve hours. Considerable hardening took place in the sac, but rest could not be maintained, and two weeks after operation the patient left the hospital, and died some time later from pressure of the aneurism upon the trachea.

DR. A. G. GERSTER, of New York, read a paper entitled "Surgery of the Rectum," based in part upon the cases treated at Mt. Sinai Hospital, New York, during the four years ending January 1, 1893. During this period 557 patients with rectal disease were admitted; 280 of these were classed under the head of hemorrhoids; next in frequency were fistulæ.

In recently developed and moderate cases of hemorrhoids, depletion of the portal circulation by salines, etc., is often sufficient. In the way of operation, decided preference was given to the clamp and cautery. After thorough stretching of the sphincter and proper preparation of the gut by adequate catharsis, this process has invariably given satisfactory results. Whitehead's or Lange's operation was reserved for the more aggravated cases, characterized by prolapse of the anal or rectal mucous membrane. The results of this operation, if the essential points of the technique are faithfully carried out, are more brilliant and rapid than those of any other known method.

One hundred and eighteen cases of fistula in ano had been operated upon. The time needed for cure varied from five to sixty-five days. The average was eighteen days. The time required for healing was shortened by careful excision of the pyogenic membrane of the fistula and immediate cutgut suture of the wound in tiers.

Among the forty-nine cases of ischio-rectal abscess,

there were some dreadful forms of destructive phlegmon of the ischio-rectal connective tissue. Over one-third occurred in diabetic subjects. The treatment consisted in converting the irregular burrows into a simple and shallow, often very extensive wound. This was followed by immediate improvement, and a marked diminution in the amount of sugar in the urine.

Ulcers of the rectum were treated by excision and suture, with satisfactory results.

Extensive and mostly intractable ulcerative proctitis was observed in six cases—all in women. In four cases linear proctotomy and gradual dilatation afforded moderate alleviation. In two cases inguinal colotomy was performed. In one of these cases excision of the rectum was later resorted to, with a fatal termination, due to collapse from acute anemia.

Eleven cases of prolapse of the anus were treated; mostly in children of tender age. The linear application of the actual cautery was generally followed by a cure.

Rectal polypus was treated in seven cases, mostly in children, by ligature and ablation. An eighth case, one of multiple adenoma of the rectum, was also treated. The masses were burnt off or tied off by ligature. Four weeks later the coccyx and a portion of the sacrum were removed. The rectum was laid open and a number of adenomata high up were removed. The wound was left open and at subsequent periods other tumors were removed as they formed.

Seventeen cases of carcinoma of the rectum were observed. In five cases operation was declined, and in three operative treatment was not considered advisable. In the remaining nine cases inguinal colotomy was performed five times, with one death. Excision of the rectum, according to the method of Kraske, was performed three times, with one death; and once the old-fashioned perineal extirpation was successfully resorted to. Cicatricial or neoplastic stenosis of the rectum was always considered an ample indication for the performance of colotomy. The operation was performed as follows: After thorough purgation, a longitudinal incision was made two inches to the inward of the left anterior superior spine, beginning two inches above Poupart's ligament. The peritoneum was divided and attached to the skin by a few silk sutures. The colon was sought for and withdrawn sufficiently to bring the mesentery of the middle of the coil to the surface; then a long shawl-pin was passed through skin and peritoneum on one side, then through the mesentery behind the gut, and, finally, through the peritoneum and skin on the other side. A circular, continuous suture was run around the incision. Forty-eight hours later the gut was opened by a transverse incision reaching nearly down to the mesentery.

DR. L. S. PILCHER, of Brooklyn, N. Y., said that in dealing with hemorrhoids he had usually practised ligation and removal, but in the more severe cases he had practised excision by the Whitehead-Lange method. The results had been so satisfactory that he had not employed the clamp and cautery. Among the disadvantages of the method of excision are the length of time required and the tendency to free bleeding.

In fistula, good results had been obtained in a number of cases by dissecting out the entire tract and applying sutures. This procedure is not applicable to all cases.

Ten cases of carcinoma of the rectum were treated. In six, relief by operation was attempted. In two of these a fatal termination occurred a short time after operation. In the others relief was afforded for a certain length of time.

DR. H. H. MUDD, of St. Louis, said that some time ago he had given up the use of the ligature, on account of the pain caused by it, and had substituted the use of the clamp and cautery for a period of two years. He has had two severe hemorrhages while using the latter method, and did not consider it as safe as the ligature. He now uses the ligature in a modified way. He cuts through the portion of tumor on the cutaneous surface, and then applies the ligature to the upper portion of the mass.

Cases of carcinoma of the rectum have usually been seen at a late period. In two cases Dr. Mudd has practised extirpation by the perineal method, with success. He has attempted removal after excision of the coccyx and sacrum, but without success. In one case he excised the upper portion of the rectum through the abdomen and made an end-to-end anastomosis, and with success.

DR. L. MCLANE TIFFANY, of Baltimore, said that in cases of ulceration with cicatricial stenosis he had seen improvement follow colotomy, although the cicatricial contraction in some cases almost completely closed the rectum.

DR. T. S. PREWITT, of St. Louis, held that when inguinal colotomy is performed in cases in which there is no hope of restoring the natural passage, it is better to divide the bowel entirely and thus prevent the passage of fecal matter into the distal portion of the intestine. He objected to the closure and dropping of the distal end, as there may be collections of secretion in the bowel that it is desirable to wash out, and this can be done conveniently if the opening is permitted to remain.

DR. A. G. GERSTER said that hemorrhage never occurred from the use of the clamp and cautery if the cautery were properly applied and not too much heat were employed. In the Whitehead or Lange operation, profuse hemorrhage does not occur unless the incision is made too deeply. It should closely hug the inner margin of the sphincter, and the mucous membrane should be stripped off without the use of the knife. In the final transverse division of the mucous membrane a small portion only should be cut at a time, and this secured by suture before another portion is cut.

DR. ROSWELL PARK, of Buffalo, exhibited anatomic specimens illustrating a method of preparation. Preparations of joints were shown, made thirteen years ago, in which the joints were still movable, although they had been exposed to the air.

DR. PARK also made a "Report of an Attempted Bloodless Operation for Malignant Polypus Springing from the Base of the Skull." The case was one of a rapidly growing malignant tumor, completely filling the pharynx, in which operation was attempted at the patient's request. In order to lessen the danger from hemorrhage, the trachea was isolated and a rubber tourniquet passed around the remainder of the neck. While there was no arterial hemorrhage, there was excessive venous bleeding. The jaw was resected and the malignant mass removed. During the operation respiration ceased, and efforts at restoration were

required for forty-five minutes before the operation could be resumed. The patient left the table in apparently good condition, but died the next morning from shock, there having been no bleeding.

The following were elected as the officers for the ensuing year: President, Dr. J. Ewing Mears, of Philadelphia; First Vice-President, Dr. Roswell Park, of Buffalo; Second Vice-President, Dr. Lewis S. Pilcher, of Brooklyn; Secretary, Dr. J. R. Weist, of Richmond, Ind.; Treasurer, Dr. John B. Roberts, of Philadelphia; Recorder, Dr. De Forest Willard, of Philadelphia; Member of Council, Dr. J. Collins Warren, of Boston; Chairman of Committee of Arrangements, Dr. L. McLane Tiffany, of Baltimore.

The following were elected to membership: Dr. H. S. Burrell, of Boston; Dr. Perry H. Millard, of St. Paul; Dr. Albert B. Miles, of New Orleans; Dr. Samuel J. Mixter, of Boston; Dr. John W. Elliott, of Boston; Dr. John Parmenter, of Buffalo; Dr. J. McF. Gaston, of Atlanta. To honorary membership: Prof. Carl Gussenbauer, of Prague.

THIRD DAY—JUNE 1ST.

DR. J. WILLIAM WHITE, of Philadelphia, read a paper on "The Present Position of the Surgery of the Prostate." He pointed out that the prostate gland is a part of the sexual apparatus, and not chiefly an accessory organ of micturition, and that the growth or growths that make up the enlargement are analogous to the fibromyomata so frequently found in the uterus.

The changes in the bladder are due to the mechanical obstruction, the circulatory disturbance produced by pressure on the prostatic veins, and to septic infection.

Purely expectant treatment is proper only when the enlargement causes no symptoms, and cauterization is easy and there is no residual urine. Ergot is the only drug that offers any prospect of usefulness, but it is far from demonstrated that it has any distinct effect. Palliative treatment, consisting in the systematic use of steel sounds for dilatation and the employment of the catheter, is of great value in a large number of cases.

Over-stretching of the prostatic urethra is *not* likely to be followed by good results in cases in which the median lobe and the vesical neck are chiefly involved. In lateral hypertrophy, when the urethra is simply narrowed, it may be of use. Perineal prostatotomy should be regarded as the operation of choice in cases in which, with marked dimunition of the expulsive force, and with cystitis, there are evidence of widespread degenerative disease, or of distinct renal disease, toxemia, and general feebleness. When the growth can be reached by the finger, and is of small size or pedunculated, perineal prostatotomy can always be converted into a prostatectomy. Suprapubic prostatectomy is the operation to be preferred in those cases in which, palliative treatment having failed, there are unmistakable indications that the local conditions are growing worse, the general health remaining unaffected. The question suggests itself that, possibly, if the analogy between uterine fibro-myomata and prostatic growths is a real one, castration might have the same effect upon the latter that oöphorectomy has upon the former. A series of experiments on dogs showed that the average weight of the prostate in dogs was 35.3 grams. After castration and the destruction of the dogs at varying intervals after the operation (the longest interval being seventy-two days) there was in all a marked diminution in the weight of the other prostate, according to the weight of the animal and the period at which it was killed.

As to the employment of castration as a therapeutic measure in prostatic hypertrophy, the final answer must be left with the patient.

DR. ROSWELL PARK, of Buffalo, read a paper on "The Importance to the Surgeon of the Bacillus Coli Communis." Evidence was presented showing that the colon-bacillus, which is constantly present in the intestinal canal, is not always a harmless parasite, but that it at times becomes an active invader, not confining itself to the intestinal mucosa, where it may cause most active degenerative lesions, but penetrating into the general circulation, and exercising pernicious activity in numerous other organs, as well as toxic effects upon the system at large.

Herniary cholera, so-called, is due to intoxication from the products generated by virulent colon-bacilli. From the intestinal canal the colon-bacillus may ascend the biliary passages, determining lesions in the gall-bladder or liver. It is known to be one of the frequent factors in the development of peritonitis of intestinal origin. In the kidneys, as well as in the bladder, the colon-bacillus may display pathogenic and pyogenic properties. The organism may be introduced from without, as upon a catheter, or it may be transferred from its normal habitat by some traumatism of the natural channels. The endocardium, the meninges, the pleura, the synovial membranes, and the lungs are at times the seat of its invasion. It is probable that there is a form of post-operative septicemia due in no direct way to the operator or operation, but, in fact, an enterosepsis, caused by the migration from the intestinal canal of the colon-bacillus. Constant attention to the intestinal canal should therefore be the watchword of the surgeon both before and after operation.

Six cases were reported in which the colon-bacillus was found; in some instances it was the only organism present. The cases were as follows: 1. Carcinoma of the intestine, with abscess; 2. Recurrent peri-appendical abscess; 3. Acute abscess of the liver; 4. Gangrenous appendicitis; 5. Acute appendicitis, with perforation and obstruction of the bowel; 6. Suppurative cholecystitis.

DR. JAMES M. BARTON, of Philadelphia, presented a paper entitled, "When Shall we Remove the Vermiform Appendix?" The following conclusions were arrived at: 1. An unruptured appendix, distended and discolored, should be removed. 2. When rupture of the appendix into the general peritoneal cavity has occurred, the appendix should be removed and the abdomen flushed. 3. When a localized abscess that has existed for some days or weeks has ruptured into the general peritoneal cavity, the appendix should be removed and the abdomen flushed. 4. When adhesions to the abdominal wall have formed, the abscess should be opened and drainage provided for, care being taken not to break the adhesions that separate the abscess-cavity from the general peritoneal cavity; the appendix should not be searched for or removed. 5. When symptoms of obstruction are present, the abscess should be evacuated, protecting the general peritoneal cavity with gauze; the

abscess-cavity should be disinfected, and obstructive adhesions sought for, and if found, these alone separated; otherwise, all adhesions should be separated and the appendix removed. 6. When an abscess has formed and there is no general peritonitis or symptoms of obstruction, the abdomen should be opened, the general peritoneal cavity protected by means of gauze, and the abscess opened and drained; the appendix should not be searched for or removed.

The following papers were read by title: "Cystic Growth within the Internal Condyle of the Femur," by Dr. Thomas G. Morton and Dr. William Hunt, of Philadelphia; "Gunshot Wounds of the Intestines—Report of Thirteen Cases," by Dr. Albert D. Miles, of New Orleans; "Dislocation and Injuries of the Semi-lunar Cartilage," by Dr. S. J. Mixter, of Boston; "Report of Cases of Anthrax," by Dr. H. L. Burrell, of Boston; "Lymphangitis, Accompanied with Blood Poisoning, and followed by Multiple Abscess," by Dr. J. McFadden Gaston, of New Orleans; "Clinical and Medico-legal Observations in Certain Forms of Spinal Injury," by Dr. Perry H. Millard, of St. Paul; "A Series of Operations on the Elbow," by Dr. J. S. Wight, of Brooklyn.

The Association then adjourned, to meet in Washington, the first Tuesday in May, 1894.

AMERICAN PEDIATRIC SOCIETY.

Fifth Annual Meeting, held at West Point, May 24, 25, and 26, 1893.

FIRST DAY—MAY 24TH.

THE meeting was opened by the Address of the President, DR. A. D. BLACKADER, of Montreal. He reviewed the scientific work of the Society during the past five years, in order to show its broad scope and to refute any possible charge of narrow specialism, and then discussed the important bearing that a proper understanding and treatment of the constitutional diatheses in childhood had on adult life.

DR. M. P. HATFIELD, of Chicago, under the title of "This Year's Failures in Diphtheria," then reported six fatal cases of diphtheria, death occurring in each from a different cause and at a different stage of the disease. From the first case he drew the lesson that one should never omit to carefully examine the throat of a child at the first visit, even though it be late in the evening and the child asleep. In another case, the writer reproached himself for not having insisted more vigorously upon a thorough carrying out of the nasal treatment, and for not having given sufficient weight at their onset to the backache, anorexia, and vomiting that were the initial symptoms of the fatal diphtheric nephritis. He saved the sister of this child, as he believes, by more careful attention to these points. Another child, four years old, was apparently recovering rapidly from diphtheria, when, on the sixth day, while sitting up in bed, death occurred almost instantly from heart-failure. He thought it possible in this case that mercurials might have been unduly pushed; at any rate it served to emphasize the well-known danger of paralysis of the heart. The fifth case was one in which intubation was performed quite early and under apparently favorable circumstances; yet the case terminated fatally, as had all other cases of intubation occurring in his practice, whether the operation had been performed by himself or by a skilled consultant. He thought that intubation in the hands of the average practitioner failed to give either the 25 or the 33 per cent. of recoveries claimed for it. The sixth case was that of a child, twelve years of age, who developed a popliteal thrombosis, and was given a single dose of an opiate to control his terrible pain. He died shortly afterward, either of opium-narcosis or of heart-failure induced by the disease.

In the discussion that followed, DR. W. D. BOOKER, of Baltimore, and DR. J. H. FRUITNIGHT, of New York, reported cases occurring in their experience that illustrated the value of intubation, even in severe types of laryngeal diphtheria. DR. A. JACOBI referred to the striking differences in the results obtained by individual physicians in the treatment of diphtheria, and emphasized the importance of strict attention to the nasal treatment, and the *early* employment of stimulants. DR. J. LEWIS SMITH, of New York, said that he was in a position to know that Dr. O'Dwyer was saving more cases of intubation now than formerly, by combining intubation with the frequent use of sublimations of calomel. DR. W. P. NORTHRUP, of New York, tried to encourage Dr. Hatfield to persist in using intubation, by stating that while five out of his first eleven cases of intubation recovered, the twenty-two cases immediately following proved fatal. Autopsies in these fatal cases showed that the membrane had extended into the finest bronchioles, and proved that both tracheotomy and intubation must have been powerless under such circumstances.

DR. J. LEWIS SMITH next read a paper on "The Value of Peroxid of Hydrogen in Diphtheria." He said that he had seen cases in which the use of a fifteen-volume solution of hydrogen dioxid, diluted with two volumes of water, had caused increased irritation, and, in three instances, had even produced a fibrinous film over the parts, as described at the last meeting of the Society. He had also noticed something that was to him entirely new, viz., the occurrence of hoarseness, apparently as a result of the inhalation of the vapor of hydrogen dioxid, when this agent was used in a hand-atomizer. The phenomenon disappeared as soon as the hydrogen dioxid was discontinued. The irritation produced in these cases was probably due to the free acid contained in the preparation. He had found that Marchand's solution requires five grains, the Oakland Company's product three grains, and Squibb's preparation two and a half grains of sodium bicarbonate per ounce to neutralize this acidity. Dr. Squibb had informed him that any solution of hydrogen dioxid having a neutral or alkaline reaction would decompose at ordinary temperatures at the rate of two or three volumes per day. Dr. Smith therefore suggested that a little sodium bicarbonate be added to the solution of hydrogen dioxid each time before using, in order to do away with any possible unpleasant effects from its use.

DR. A. SEIBERT, of New York, detailed some experiments that he had made regarding the comparative efficiency of hydrogen dioxid, aqua chlori, and Labarraque's solution. The last-mentioned solution was found to be by far the most powerful, dissolving in twenty minutes, without agitation, a piece of diphtheric membrane, about one-eighth of an inch square. Hydrogen dioxid

had no such action and did not destroy the bacilli. DR. J. H. FRUITNIGHT had observed the same irritating effects from hydrogen dioxid, and had made use of lime-water as a corrective, because of its solvent action on the membrane, in addition to its alkalinity. He prescribed it separately and obtained good results.

DR. W. D. BOOKER, of Baltimore, reported a case presenting the clinical features of true croup, yet in which the bacteriologic examination proved it to be diphtheric. He also showed that the prevailing view that the diphtheric bacilli do not extend far from the local lesion is not strictly correct, and that by bacteriologic examinations of *large* portions of various organs, a few bacilli may be found, even though none is observed in sections of these organs. DR. HENRY KOPLIK, of New York, said that in cases in which no membrane is visible he had found the most sensitive culture-medium to be the mixture of bouillon and blood-serum. In doubtful cases it is sometimes possible to find at least one colony of the diphtheric bacilli.

SECOND DAY—MAY 25TH.

The work of the second session was opened by the reading of a paper by DR. J. P. CROZER GRIFFITH, of Philadelphia, on the "Use of Antipyretic Drugs in the Febrile Affections of Children." He cited a number of cases illustrating the beneficial action of such remedies, and the fact that the nervous symptoms, and not the degree of temperature, constitute the indication for the use of antipyretics.

DR. T. M. ROTCH, of Boston, presented the report of the committee appointed at the last meeting to revise the nomenclature of gastro-intestinal diseases. The report contained a provisional classification founded on four or five hundred clinical cases, and represented the joint labors of DR. L. E. HOLT and himself. It was especially urged that the term "dysentery" be entirely discarded, and that an attempt be made to classify these diseases more nearly in accordance with our pathologic knowledge. Dr. Rotch also presented the results of the work of Dr. F. FORCHHEIMER and himself in revising the nomenclature of the diseases of the mouth. After a long and earnest discussion, it was decided that these subjects were so intricate and yet so important, that it was better to defer final action for another year.

Next in order came a paper by Dr. LOUIS STARR, of Philadelphia, on "Proctitis in Early Infancy." He said that when with moderate wasting and with indigestion, there is a history of small, frequent movements of the bowels, accompanied by straining, one may suspect the presence of proctitis; and if, with this, there are excoriations about the anus or a catarrhal inflammation of the roof of the mouth, one might be still more certain of its presence. The treatment should consist in flushing out the bowel with warm water and salt, and the use of enemata of oil. In the more obstinate cases it may be necessary to resort to several small injections of argentic nitrate solution—from half a grain to a grain to the ounce. Most of the cases that he had seen had occurred among the better class, and in children that were breast-fed.

DR. A. JACOBI said that proctitis is much more frequent than is generally supposed, and is often of the descending variety, even though it may appear not to be so. He warned against the use of the argentic nitrate injections, especially of the strength mentioned, for he had found them very liable to irritate the rectum and increase the tenesmus. He preferred starch-water injections.

The subject of "Acute Scleroderma" was carefully presented in a paper by DR. WILLIAM OSLER, of Baltimore, who, after referring briefly to the literature, reported a case in detail, with the results of the post-mortem examination. The subject was a child, fourteen months old, who first developed a croupous pneumonia, and eight days later first showed the changes in the skin; with this there was a fall in the temperature to 98° in the rectum, and on the following day the whole body was like a block of wood. Deglutition was impossible, and the body felt cool, although the temperature in the rectum was 99°. Death occurred on the next day, and the autopsy was held a few hours afterward. The body appeared as rigid as if frozen. There was no pitting on the firmest pressure, and the only portions not involved in this strange process were the skin of the head and of the genitals. The microscopic examination showed a peculiar metamorphosis of the connective-tissue fibers already present, so that the structure of the skin bore a marked analogy to that found in portions of the body where the skin is normally comparatively immovable. The majority of clinicians at the present time incline to the neuropathic theory of the origin of acute scleroderma, but there is also much to support the inflammatory theory.

DR. W. P. NORTHRUP said that he had previously presented a case of this kind, and had made a most exhaustive microscopic study of it; yet neither he nor those whose opinions he had sought could find any morphologic change that might be considered characteristic.

DR. A. JACOBI pointed out the fact that the coexistence of pneumonia would account for the temperature in the case just reported being higher than in many of those previously recorded. He was inclined to look upon the condition as due to an effusion of blood containing an abnormal amount of coagulable material.

The Council of the Society had arranged for the evening session two special discussions—one on the treatment of pertussis, and the other on the treatment of constipation in early infancy. As might have been expected, the first discussion, that on pertussis, showed a considerable diversity of opinion, and called forth descriptions of many "favorite methods."

DR. FORCHHEIMER spoke of the great importance of prophylaxis, and pointed out some of the many obstacles met with in practice. One of these is the impossibility of making the diagnosis, under ordinary circumstances, during the first stage, at which time the disease is probably fully as contagious as it is later on. He considered that the best results in the medicinal treatment had been obtained from belladonna and quinine, but from the very variable results with the same drug in different members of the same family, he thought it possible that the cause of whooping-cough might be different in different cases.

DR. OSLER believed whooping-cough to be a specific disease, which runs its course very little influenced by remedies. The only one that has seemed to him useful is quinine. It would be extremely interesting if the profession could secure careful records of a large number of cases observed without any treatment, so that a trust-

worthy natural history of the disease might be written. DR. H. D. CHAPIN, of New York, considered more particularly the complications of pertussis, and spoke of the frequency of capillary bronchitis, pulmonary collapse, and enlargement of the bronchial glands. If mothers were instructed more carefully as to the dangers from exposure to inclement weather, capillary bronchitis would be much less frequent. He cited a case in illustration of the susceptibility of those just recovering from pertussis to the development of tuberculosis, and, indeed, other constitutional diseases.

DR. KOPLIK read a paper on "Heart-strain in Pertussis," and showed by pulse-tracings the marked effect of the paroxysms on the circulatory apparatus. An examination of the urine of thirty-six children suffering from pertussis showed slight albuminuria in eighteen. The occurrence of edema about the face and eyes is an indication for the immediate administration of digitalis with the other remedies usually given. DR. HOLT had made careful comparative studies of the action of belladonna, antipyrin, and other drugs, and had found antipyrin the most serviceable of all. An infant, six months of age, would at first be given six grains a day, and the dose would be cautiously increased. Pneumonia complicating pertussis he had found surprisingly fatal in institution children. DR. NORTHRUP'S pathologic studies had brought out such remarkable examples of emphysema following whooping-cough that he felt anxious to try any remedy that would be likely to mitigate the severity of the paroxysms. DR. FRUITNIGHT had a high opinion of the value of fresh air in the treatment of pertussis, and had also found small doses of bromoform useful in checking its severity. DR. WINTERS spoke very emphatically against the tendency of some to countenance the let-alone treatment, for he considered whooping-cough one of the most fatal diseases of childhood. He found that codeine, in doses of one-twelfth of a grain, every eight hours, to a child two years of age, acted most favorably; and this treatment, combined with counter-irritation, fresh air, and attention to the general health, gave results of the greatest value. DR. SEIBERT was so heartily in favor of the fresh-air treatment that he insisted upon the windows of the child's room being kept open night and day, and in all kinds of weather, and thought that this treatment, combined with the administration of quinine, was the best he had ever tried. DR. A. CAILLÉ also favored the liberal use of fresh air, but employed, in addition, nasal irrigations with boric-acid solution as a prophylactic against diphtheric infection. DR. J. LEWIS SMITH closed the discussion by referring to the comparatively new treatment of applying to the fauces a solution of resorcin—ten grains to two ounces and a half—by means of a brush or spray.

The remainder of this session was devoted to a consideration of the treatment of constipation in infancy. DR. L. EMMETT HOLT said that as the normal stools in infancy usually contain from 20 to 40 per cent. of fat, it followed that the infant's food must contain much more fat than can be absorbed. Good breast-milk contains 4 per cent. of fat, and cow's milk a little less, and consequently the fat of cow's milk is almost wholly absorbed, and the stools, consisting chiefly of casein, are hard. If cream, containing 12 per cent. of fat, is substituted for a portion of the cow's milk, the stools usually become softer. Milk-sugar has little or no effect in relieving constipation, as is well shown by the large number of dispensary patients who are obstinately constipated, notwithstanding that they are fed on condensed milk.

DR. LE ROY YALE, of New York, in discussing the local treatment of constipation, said that massage, faithfully carried out, is a valuable measure. It is best practised on an empty stomach, and should consist in small circular movements made with the tips of the fingers along the course of the ascending, transverse, and descending colon. Rectal constipation is very commonly met with, and is often due to the mechanical disadvantage at which the child is placed when sitting in the conventional position at stool. He has rarely observed undue irritation from medicated suppositories, but a certain proprietary suppository, which is quite popular, has been known on more than one occasion to give rise to symptoms of belladonna-poisoning. He was not sure that the habitual use of enemata caused chronic constipation. DR. LOUIS STARR said he had used with much satisfaction a suppository containing extract of belladonna and purified aloes mixed with cocoa-butter.

THIRD DAY—MAY 26TH.

The scientific work of the last day was opened by a communication from DR. H. D. CHAPIN on "The Preservation of Cow's Milk." He detailed some experiments that he had made in connection with the effect of static electricity upon milk, and while these were not altogether conclusive, they gave promise of some practical results on further investigation. While the plan of adding $\frac{1}{10}$ of 1 per cent. of sodium silico-fluorid has proved efficient, so far as the preservation of milk is concerned, it has not been a commercial success. The author said that as hydrogen dioxid, when mixed with milk, soon decomposes, giving off an atom of oxygen and leaving water, it had occurred to him to test its value as a preservative. He exhibited specimens of milk so treated, and, after detailing his experiments, drew the conclusion that a small percentage of hydrogen dioxid will check lactic acid fermentation. In the discussion, the position taken by most of the speakers was to the effect that efforts of this kind were a step in the wrong direction; investigation should be directed rather to the dairy and to means of purifying the supply and bringing the milk more quickly to the consumer.

DR. IRVING M. SNOW, of Buffalo, read a paper entitled "A Gastric Neurosis in Childhood," in which he described curious recurrent attacks of severe vomiting, occurring in a very neurotic child of eight years. When quite young she had frequent and severe convulsions, and when these disappeared the attacks described took their place. These were accompanied by the secretion of hyperacid gastric juice, which was discharged during the attacks of vomiting. The slightest excitement was sufficient to bring on such an attack, which would terminate very abruptly. The affection finally yielded to the administration of large doses of bromid and chloral by rectum, together with the use of tonics, gymnastics, and other methods directed toward improving the general health.

DR. HOLT cited a similar case that had puzzled many physicians, until finally it was discovered that, while during the intervals the proportion of uric acid to the urea

excreted was 1 to 40, during the height of the paroxysms it sank to 1 to 150. After excluding all sugar from the diet, limiting the quantity of starches, and allowing milk, meat, and bread, the improvement was very striking, and for the past sixteen months there had been no return of the symptoms. DR. CHRISTOPHER, of Chicago, reported a similar case, occurring in an adult, and DR. ROTCH said that he had already written upon this subject, and had seen a great many cases, although they were not commonly recognized as instances of a distinct affection. He looked upon the condition as a reflex disturbance, related probably to the abdominal ganglia, and he did not think dietetic treatment of any value. He advocated starvation-treatment for twenty-four hours, and the use of enemata of bromid and chloral. A lengthy discussion of these points then followed.

DR. B. K. RACHFORD, of Newport, Kentucky, read a suggestive paper on "The Etiology of Incontinence of Urine," in which he took the ground that the three important factors were: (1) irritability or instability of the nervous centers, (2) anemia, and (3) reflex irritation. In about one-half of the cases no important pathologic condition could be found as a cause of this irritability.

DR. F. FORCHHEIMER, of Cincinnati, contributed a paper on "The Treatment of Certain Forms of Anemia in Children." He considers the intestinal tract the principal source of hemoglobin, and has obtained surprisingly rapid and satisfactory results from the administration of such drugs as salol and hydronaphthol before meals, and of blood in some form after meals.

The remainder of the session was devoted to a consideration of a number of clinical reports. DR. HOLT treated of "Meningitis Complicating Pneumonia;" DR. FRUITNIGHT, of the benefit to be derived in cases of rhachitis from the administration of the calcium lacto-phosphate; DR. S. S. ADAMS, of a case of erysipelas of the face and scalp, in which four or five days elapsed after the onset of the constitutional symptoms before the cutaneous flush appeared; DR. HUBER, of an abscess of the lung in an infant of thirteen months; and DR. ROTCH, of the construction of a new incubator for premature children.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Sixth Annual Meeting, held at Detroit, Michigan, June 1, 2, and 3, 1893.

FIRST DAY—JUNE 1ST.

DR. HENRY J. CARSTENS, of Detroit, delivered an Address of Welcome, which was responded to by DR. GEO. H. ROHÉ, of Baltimore.

DR. GEO. F. HULBERT, of St. Louis, read a paper entitled "Intra-uterine Asphyxia, with Report of Three Cases." The first case was delivered by natural means, the other two with instrumental assistance. In all, the fetal heart-sounds had been heard distinctly half an hour before delivery, but somewhat weakened in force. In all, at the time of delivery, the appearance presented by the children was one of extreme pallor, with a deepened tinge of the lips and absolute muscular relaxation. The heart beat at the rate of from 40 to 50 per minute. The usual methods of artificial respiration were resorted to, to the extent of introducing a catheter into the trachea. That air did penetrate was evidenced by the slight crepitus heard during compression of the chest in the expiratory part of the respiratory act. Artificial respiration was maintained until the heart ceased beating; until it ceased to respond to the stimulus presented by the aëration of the blood by the artificial respiration. In none of the cases were there any external evidences of pathologic conditions. The umbilical cords did not exceed the normal limits, but in all three cases blood-clots were found occupying the placental surface in more than half of its area. These clots were well formed, intimately attached to the placental tissue, and smooth upon the uterine side. There was nothing to indicate that the clot had been torn from the uterine surface, but rather that placental separation had taken place and the clot had formed and become adherent to the placental tissue. So far as the mothers were concerned, they were in average good health; the first was a primipara, the last two multiparæ. The labors had not been more than twelve hours in duration, and presented no abnormality other than that in the first case the delivery was of the "piston-rod" variety, the head being forced down to the perineum at each pain, and promptly receding to the brim upon the disappearance of the pain. In none of the cases were the pains sustained and vigorous, but rather short and inefficient. In none was chloroform used, and in only one, the first, a rectal injection of twenty grains of chloral was given during the first stage. The element of compression upon the head was not at all pronounced, and would not have attracted attention. In the last two cases there was no pulsation appreciable in the cord; in the first case no record of this fact had been made. The children were separated from the mothers immediately, and in the first a small amount of blood was permitted to escape from the severed end of the cord. Unfortunately, in none of the cases was a post-mortem examination obtained. There was only a moderate amount of the amniotic fluid following the birth of each child. In the first two cases dilatation was well advanced before the membranes ruptured; in the last case rupture occurred at the beginning of dilatation.

DR. HENRY J. CARSTENS, of Detroit, Mich., related a case similar to those reported, and attributed the condition of the child to either large doses of ergot, given by an irresponsible practitioner, or to some disturbance of the centers of respiration.

DR. JOHN M. DUFF, of Pittsburg, expressed the view that in the case of stillborn children—when apparently before birth they were well, the heart beating properly, etc.—death is due to cerebral hemorrhage. He has seen two post-mortem examinations within the past two years corroborative of this view.

DR. WM. H. WENNING, of Cincinnati, read a paper on "Placenta Previa."

He pointed out that the pathology of placenta previa is far from being definitely settled, owing to the discrepancy between clinical phenomena and anatomic demonstrations. The term was originally employed to express the fact of the after-birth lying before, which might apply to a prolapse of the placenta as well as a primarily low insertion. At the present day it implies a fixation of the placenta to the lower pole of the uterine cavity. Omitting minor points of discussion, the placenta may be said to be previa when it is inserted

wholly or in part to that portion of the lower uterine segment which is subject to distention in pregnancy or labor.

DR. JOHN MILTON DUFF, of Pittsburg, read a paper entitled "The Care of Pregnant Women."

He said that every pregnant woman needs moral and hygienic, if not medical treatment, from the time that pregnancy is recognized until convalescence from the lying-in.

Before attending a woman in labor the physician should be familiar with her personal and family history (medically speaking), so that he may note personal or family idiosyncrasies; discover and treat diseased conditions, if present; determine the presentation, if not the position, of the child *in utero*; ascertain the dimensions of the pelvis, the presence of deformities and the general physical condition; and judge of her ability to withstand the throes of labor—in short, so that he may be able to anticipate any accident or abnormal condition that might arise during labor, and if possible to ward it off or treat it promptly, scientifically, and successfully.

Attention was called to strychnine as an adjuvant in the treatment of disorders of pregnancy and as an aid in parturition.

Good results were reported from the systematic administration of doses of from one-thirtieth to one-sixtieth of a grain three times a day for from two to six weeks prior to the expected onset of labor.

DR. EDMUND M. POND, of Rutland, Vt., read a paper entitled "Dilatation of the Cervix for Dysmenorrhea," in which he advocated the use of a light Palmer dilator, and packing the uterus when the cervix is elastic; to be repeated, if necessary. In case of failure, a heavy dilator is to be tried. If the cervix is long, conical, and cartilaginous, and dilatation and packing have failed, free division from the internal to the external os, dilatation with a light instrument, and introduction of a stem pessary, to be worn from ten to fourteen days, are to be recommended.

DR. GEO. S. PECK, of Youngstown, O., read a paper on "Extra-uterine Pregnancy," and reported several interesting cases.

DR. EUGENE BOISE, of Grand Rapids, Mich., read a paper on "The Nature of Shock." He concluded that shock is not a paresis, either partial or general, of the vasomotor nerves, but a hyper-irritation of the entire sympathetic system. The skin is pale and livid, from contraction of the arterioles, in consequence of stimulation of their vasomotor nerves. The heart's action is rapid from stimulation of its sympathetic nerve-supply. There is scanty secretion of urine from contraction of the renal arteries as a result of stimulation of their nerve-supply. The skin, though pale and livid, is bathed in perspiration from stimulation of the secretory nerves of the glands. The pupils are dilated from stimulation of their sympathetic nerve-supply. The pulse at the wrist, while rapid and small, as would be expected in vasomotor stimulation, is soft and compressible in consequence of the scanty relaxation or dilatation of the heart. The condition of the heart may not have been actually demonstrated, but may justly be inferred by analogy—reasoning from the action of the uterus under similar conditions. Each contraction of the uterus is normally followed by a period of perfect relaxation. Over-irritation or stimulation of the uterine ganglia or sympathetic-nerve supply causes rapid contraction, with very imperfect relaxation. It is fair to infer the same condition in the heart under similar conditions. Thus, the supply of blood to the arteries is scanty and the blood-pressure is low. That the condition of the heart is one of stimulation rather than of paresis may be considered demonstrated by the fact that, in cases of sudden death from severe shock, the heart has been found contracted and empty. Admitting the correctness of this pathology, it follows that the treatment should be conducted on the line of sedation to the sympathetic system, as by amyl nitrite, nitro-glycerin, morphine, and the application of moist heat, *first*, to the surface; *second*, through the long tube in the colon; and *third*, by transfusion of a saline solution at a comparatively high temperature.

SECOND DAY—JUNE 2D.

DR. WALTER P. MARSTON, of Detroit, read a paper entitled "A Contribution to the Pathology of Surgical Diseases of the Gall-bladder."

DR. JAS. F. W. ROSS, of Toronto, followed with a paper on "A Few Practical Notes on the Establishment of Anastomosis Between the Gall-bladder and Intestine for Obstruction of the Common Duct, with the Relation of a Case of Obstruction of the Common Duct by a Small Growth."

The President, DR. L. S. MCMURTRY, delivered the Annual Address. His subject was "The Present Position of Pelvic Surgery." After a brief sketch of the history of ovariotomy, it was pointed out that from its beginning the department of pelvic surgery has been promoted and advanced by the labors of a few men. When the new surgery of the peritoneum was introduced, it was seized upon in a reckless way by the multitude, and for a time its very existence was threatened. The splendid results of the few who were trained for the work by a rigid apprenticeship were made the basis of operations by many wholly unprepared to carry out an exacting and difficult practice. Operations were undertaken upon inadequate and erroneous conceptions of pathologic conditions, and even, indeed, without any definite pathologic data whatever, until in many influential quarters the greatest discredit was thrown upon the work of able and conscientious men who were masters of pelvic pathology and pelvic surgery.

DR. ROSENWASSER, of Cleveland, Ohio, read a paper entitled "What are the Indications for Abdominal Section in Intra-pelvic Hemorrhage." He offered the following conclusions:

Intra-pelvic hemorrhage may be free into the peritoneal cavity, or primarily or secondarily circumscribed by true or false membranes. Though nearly always due to ruptured ectopic pregnancy, the same surgical principles underlying the treatment of other similar hemorrhages are applicable in intra-pelvic hemorrhage. Such treatment must, therefore, vary according to the conditions dependent on the hemorrhage, and, secondarily, on the original cause of the hemorrhage; hence to prevent free intra-pelvic hemorrhage, abdominal section is indicated in all cases of presumably recognized unruptured tubal pregnancy, either as prophylactic, or for the purpose of removing pathologic conditions not otherwise curable. In all cases of free intra-pelvic hemorrhage,

from whatever cause, early or immediate section is the only safe means of averting a fatal termination. In cases of circumscribed, intra-pelvic hemorrhage, section is indicated for the removal of increasing blood-clot and *débris*, whether due to recurrent bleeding or continued growth of a fetus; and whenever the symptoms indicate decomposition of the blood-clot. Lastly, section is also indicated whenever the pressure of the circumscribed blood-mass causes obstruction of the bowel.

DR. H. W. LONGYEAR, of Detroit, read a paper entitled "A Plea for Better Surgery in the Closure of the Abdominal Incision." From investigation and observation he has concluded that suppuration of the wound made in abdominal incision can occur with either method, but is much less liable to take place with the buried suture, if properly placed and sealed, than with the *en masse* suture, as, in the latter, pyogenic germs may enter the wound *via* the sutures or their sinuses. In fact, suppuration is often the result of the dragging in of germs attending the removal of the *en masse* suture.

Very thin or very fat walls lead to the development of hernia after abdominal incision, by preventing the accurate coaptation of the aponeuroses, which could only take place with the *en masse* suture, and would be prevented by the use of the buried method. The extra-peritoneal treatment of the stump in either case is bad and will some day be considered unsurgical, but if the fascia is brought closely around the stump and held there by the buried suture until it forms a solid firm ring around it, the viscera will be less liable to burst through it than if sutured but for nine or ten days, and afterward wedged apart, before firm cicatrization has had time to take place. When the aponeuroses form solid union with the buried suture no bandage will be required, as they are as strong as before incision. Imperfect closure is very much less liable to occur when the exact method of the buried suture is used, than with the "guess" method of the *en masse* stitch. In one it is known that the fascia is approximated, while in the other there is less certainty. Long incisions are always to be deprecated, but if healed by first intention after the use of the buried suture, hernia cannot occur, as by this method the chance of the interposition of other tissues between the apposed edges of the fascia is obviated. The straining of vomiting resulting from the nausea of prolonged anesthesia need not be feared when the buried suture is used, as the fascia cannot be separated by any such force when united with a strong suture. Too early rising is only to be feared after removal of sutures, and as the buried suture remains indefinitely to exert its restraining force, this cause has to do only with the *en masse* suture.

Drainage will be required with both methods of suture, but with the increasing tendency to use small tubes, the danger is becoming much less. Large gauze drains should be avoided on this account. The buried suture, however, properly protected from the drainage-opening by one *en masse* stitch, will usually insure solid union of the fascia close to the tube, and thus give the best result. Failure to take up the aponeurosis in the suture can only occur with the *en masse* stitch. Too early removal of sutures can only occur with the *en masse* stitch, and is obviated by using the buried suture. The use of soft catgut is permissible only when the safe tendon suture, or even silkworm-gut or silver wire, cannot be obtained.

If the patient becomes too fat, the cicatrix of the aponeurosis will not separate if reinforced with a strong tendon suture. Non-union of muscles is not likely to occur if their sheaths are properly approximated and held in place by the buried suture. If cut transversely, a fine tendon will insure their union. The use of the interrupted suture is easily obviated by simply using the buried animal suture in the closure of all abdominal incisions.

DR. C. A. L. REED, of Cincinnati, contributed a paper entitled "The Management of the Abdominal Incision."

He said that the occurrence of suppuration and of ventral hernia in the line of the abdominal incision pointed to some defect of technique or management. In preparation, it was recommended that, first, an application of oil be made, followed by ether, with some strong alkali; then cleansing with clear water, followed by the persistent application, for over half an hour preceding the operation, of a strong solution of mercuric chlorid. The incision should be made carefully in the median line through the linea alba, and the peritoneum should immediately be laid open smoothly with the knife. In closure it was recommended that an interrupted suture of silkworm-gut be passed from within outward on both sides entirely through the tissues, but so passed that it enters the wall of the peritoneum near the margin, dips deeply into the median tissue, and is brought out near the margin of the integument. The sutures should not be tied too tightly, and with the knot to one side of the incision. The wound should be dressed with aristol, boric acid, and a bandage carefully applied. When the sutures are removed a firmly-fitting adhesive strip should be applied that will not cause compression of the incision, with a consequent tendency to separate the internal margin.

THIRD DAY—JUNE 3D.

DR. JOHN C. SEXTON, of Rushville, Ind., contributed a paper upon "The Causation and Prevention of Central Laceration of the Perineum."

He pointed out the rarity of the accident, as a result of the many almost perfect methods of prevention. Among the deformities and irregularities of formation that tend to cause the accident are defective or abnormal development of the perineum or pubes and anomalies of the expellant forces and positions of the vertex. The use of chloroform to a degree suspending the action of the uterine muscles was advised against as dangerous. Resort to episiotomy was especially cautioned against. It was insisted that timely and skilful use of the forceps could prevent central laceration of the perineum.

DR. X. O. WERDER, of Pittsburg, contributed a paper entitled "Pregnancy following a Partial Supra-pubic Hysterectomy, Complicated by Hemorrhage through the Abdominal Cicatrix."

The interesting points of the case reported were:

The discharge of the menstrual flow through a small fistulous opening remaining after a partial supra-vaginal hysterectomy; and the occurrence of pregnancy eight or nine weeks after the operation in a woman previously sterile.

The pregnancy terminated at about term in the

delivery of a healthy, though poorly developed child, in spite of a firm and unyielding fixation of the uterus to the abdominal wall, and in spite of frequent and profuse hemorrhage from the placental site through the sinus opening in the lower angle of the abdominal cicatrix.

DR. GEORGE H. ROHÉ, of Catonsville, Md., read a paper entitled "Further Observations on the Relation of Pelvic Disease and Psychical Disturbances in Women." He gave the further history of eighteen cases reported last year in which the uterine appendages of insane women were removed for pelvic disease. Two additional cases have been operated upon. In both, the ovaries were cystic. Of these twenty cases, there was physical recovery from the operation, with improvement of the general health in eighteen; death in two; absolute mental recovery and discharge from the hospital in four; complete physical and partial mental recovery in three; decided mental improvement, but not sufficient to justify discharge from the hospital, in seven. In three the mental condition remained unchanged, but the physical condition was decidedly better. In one case the patient was removed from the hospital by friends a few weeks after operation and placed in another institution, where she is reported to be worse mentally. A case of melancholia with suicidal tendencies was also reported in which a badly-lacerated cervix was repaired, with complete and rapid mental recovery and discharge.

The following officers were elected:

President—Dr. George H. Rohé, of Catonsville, Md.; *First Vice-President*—Dr. Walter P. Manton, of Detroit, Mich.; *Second Vice-President*—Dr. George F. Hulbert, of St. Louis, Mo.; *Secretary*—Dr. William Warren Potter, of Buffalo, N. Y.; *Treasurer*—Dr. X. O. Werder, of Pittsburg, Pa.

It was decided to hold the next meeting at Toronto, Canada, at a date to be fixed on by the Executive Council.

AMERICAN MEDICAL ASSOCIATION.

Forty-fourth Annual Meeting, held at Milwaukee, Wis., June 6, 7, 8, and 9, 1893.

(*By Telegraph.*)

GENERAL SESSION.

FIRST DAY—JUNE 6TH.

THE Association met in the Academy of Music, and was called to order by the Chairman of the Committee of Arrangements, DR. U. O. B. WINGATE, of Milwaukee, at 11 A.M.

On the platform were Dr. H. O. Walker, of Detroit, First Vice-President; Mr. Ernest Hart, editor of the *British Medical Journal;* and Dr. Jesse Hawes, of Greeley, Colorado, Fourth Vice-President.

DR. WINGATE introduced his Excellency, GEORGE W. PECK, Governor of Wisconsin, who delivered an Address of Welcome. He said he was delegated by a million and a half of people of Wisconsin to bid the Association welcome, which he did with pleasure. Wisconsin is a State where there is no need for any one to be sick; where there is no need for cemeteries, except to bury people who came there from other States with diseases that Wisconsin had not had time to cure.

Then ex-Mayor P. J. SOMERS was introduced and welcomed the Association on behalf of the citizens of Milwaukee.

DR. WINGATE then presented the President, Dr. Hunter McGuire, of Richmond, Va., with a gavel with a silver handle, whose body was made of brick, as representative of the solidity of the institutions and industries of the city. Its color was cream, as representative of the Cream City of the Lakes, and its borders were studded with pearls taken from Wisconsin's rivers.

DR. MCGUIRE then delivered the President's Address (see p. 617).

On motion of DR. SCOTT, of Ohio, the President's Address was referred to a special committee to report on the suggestions contained in it.

PRESIDENT MCGUIRE then introduced MR. ERNEST HART, who made a few timely and appropriate remarks.

The next thing in order was the report of the Treasurer, Richard J. Dunglison, of Philadelphia. The report showed a balance in the Treasury of $5844.78, and was adopted.

The report of the Secretary was read by Dr. Atkinson and adopted.

THE PRESIDENT called for the report of the Rush Monument Committee, but Dr. George H. Rohé, of Catonsville, Md., a member of the committee, asked for further time, which was granted.

In the absence of the Chairman, Dr. Comegys, of Cincinnati, Secretary Atkinson then read the report of the Committee on Secretary of Public Health. The committee was given a full hearing by the Congressional committee. The Chairman of the Senate Committee, while willing to extend the powers of the existing quarantine office, did not think it possible to secure an appropriation for its establishment. The members of the House Committee favored such a department, but the session adjourned without action. The best course, the committee thought, was an appeal to President Cleveland that he recommend the matter to Congress in his next annual message.

DR. J. B. HAMILTON, of Chicago, moved, as a substitute that the report be adopted; that it be printed in the *Journal of the Association*, and that the committee be continued. The motion was seconded and carried.

The next thing in order was the report of the committee on Pan-American Medical Congress, which was read by Dr. Chas. A. L. Reed, of Cincinnati, Secretary-General of the Congress. The committee reported that every State in the Union, South America, and Hawaii would be represented, and that everything pointed to a successful meeting. On motion the report was adopted, and a vote of thanks was extended to the committee for its efficient work. The election of delegates to the Nominating Committee was then proceeded with.

SECOND DAY—JUNE 7TH.

An invitation was read inviting the Association to hold its next meeting at Asbury Park, N. J.

DR. H. A. HARE then delivered the Annual Address on General Medicine. His subject was "A Review of Some Practical Advances in Medicine and Therapeutics."

The paper wisely refrained from detailing specific results in laboratory research, as it did from enumerating typical cases and announcing the therapeutic effects of new remedies. It confined itself wholly to the presentation of certain broad facts illustrative of the present status of the non-surgical phases of advance in medicine. The increased scope, variety and accuracy of diagnostic examinations no longer leave the practitioner any excuse for empirical treatment of a disease "on general principles." Supposedly specific ailments are being recognized as merely symptoms of the real causative and, therefore, curable distemper. A particularly instructive example of such evolution in the art of symptomatic diagnosis was cited in the case of anemia, so called. Neither under the comprehensive title "impoverished condition of the blood," nor as the assumed result of disease in the "blood-making organs," has there been warrant for empirically dosing with iron till the patient's teeth were discolored or with arsenic till he felt as though his backbone were a crowbar; but when, with adequate microscopic devices, it became possible to count and measure the decrease and increase of the blood-corpuscles in number and size, then a basis for the test and proof of the value of arsenic in pernicious anemia and of iron in chlorosis was found.

The report of the Librarian, DR. GEORGE W. WEBSTER, of Chicago, was then read by the Secretary. He recommended that the proposition from the Newberry (Chicago) Library be accepted without condition, and that the Librarian, with the Board of Trustees, be instructed to effect the permanent deposit of the Association's valuable collection, now in the Smithsonian Institution at Washington, in the new Chicago institution, there to be carefully bound, catalogued, and stored as the property of the Association, accessible, however, to the entire profession. The report was unanimously adopted.

The report of the Board of Trustees was then read by the Secretary. The Board, among other things, recommended that no advertisements appear in the *Journal* unless the formulæ have been previously submitted.

The Report of the Committee on Revision of the Constitution and Code was then read by the Chairman, DR. HENRY D. HOLTON. This report has already been made public so far as relates to the Constitution. As regards the Code the Committee recommended the following:

1. We would omit all sections of the Code that describe the obligations of patients to their physicians and of the public to physicians. The reason for this suggestion is that the Code is not designated either for patients or the public, and so the sections are superfluous.

2. We suggest the placing in the same class with the copyrighting of medical books and other similar works the patenting of all mechanical appliances used in medicine or surgery. The Code says nothing respecting the copyrighting of medical publications, and we find no good reason why it should say anything respecting the patenting of mechanical devices.

3. We recommend the more accurate definition of the term "consultation," as we find good reason to believe that serious estrangement has arisen between physicians because of the different ideas attached to this term. The existing Code of Ethics of the American Medical Association defines a consultation substantially as a meeting of doctors to discuss a case, to the end that they may equally share in its further management. By the same authority a consultation is not a meeting of physicians in a case, in which one gets all the facts possible from the other or others as a preliminary to assuming entire responsibility in its future conduct.

From these data it is clear that usually the specialist does not consult the general practitioner. He simply obtains all the facts the general practitioner possesses, preparatory to assuming full control of the case.

There are many other occasions for the meeting of medical men in connection with cases of sickness that are in no sense consultations according to the existing Code. Hence, we think that in the interest of scientific accuracy there should be a discrimination made in the matter of consultations, as present conditions differ widely from those of forty or more years ago.

Having premised this much, your Committee recommends the alteration of Article IV, Sec. 1, page 11, Code of Ethics, to read as follows: "A thorough medical education furnishes the only presumptive evidence of professional abilities and requirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as the good of the patient is the sole object in view, and this is often dependent upon personal confidence, no intelligent practitioner who has a license to practise from some medical board of known renown and acknowledged legal authority to issue such license, and who is in good moral and professional standing in the place in which he resides, should be refused consultation when it is requested by the patient."

4. It is suggested that it would be wise to re-write the Code in phraseology so plain as to make it a practical, common-sense document for daily guidance in the performance of our various duties, and an aid in meeting responsibilities incident to our professional life.

Finally, your Committee found that in but few medical colleges has this document been taught, and never as a portion of the required curriculum.

It is believed that professional success of the best sort depends as well upon a practical knowledge of medical manners and medical ethics as upon a knowledge of anatomy, physiology, pathology, therapeutics, and surgery. To be master of the rules of conduct by which our neighboring doctors can be made and kept our friends, so that the people may see that the medical men who serve them can form a band of brothers devoted to the service of suffering humanity, is to possess a most desirable professional resource.

DR. DIDAMA read a minority report, which recommended leaving the present methods of representation, nomination, Constitution, and the Code as they now stand.

The majority report was adopted, the Committee continued, and the suggested amendments, according to the Constitution, were laid over for one year.

DR. ROBERTS, of Philadelphia, protested against the construction of the Constitution by the President, requiring the action on Code revision to be postponed until the next annual meeting.

DR. N. S. DAVIS reported on behalf of the committee to confer with committees from the two State bodies of

New York, that in view of the action of these Societies, it would be unwise for the Association to enter into any such conference.

SECTION ON SURGERY AND ANATOMY.

FIRST DAY—JUNE 6TH.

The meeting was called to order by the President, DR. JAS. T. JELKS, of Hot Springs, Ark., who read an address entitled "Antiquity of Syphilis, and Moses as a Health-officer." Dr. Jelks analyzed certain of the plagues described in the Old Testament, and showed the great analogy that exists between these descriptions and syphilis as known to-day. He dwelt particularly upon the plague that afflicted Pharoah and his household to strengthen this relationship. The narration of David's affliction was also recalled as another instance giving color to the theory of the syphilitic nature of some of the plagues of old.

DR. A. J. OCHSNER, of Chicago, Ills., read a paper on "A Report of Three Cases of Acute Intestinal Obstruction Treated by Laparotomy: 1. Intussusception; 2. Volvulus; 3. Meckel's diverticulum."

The first case was that of a boy, aged three years, who, a week before coming under observation, fell and immediately felt slight pain in the cecal region, of but brief duration. Occasional pains were experienced during the next few days. At the end of a week severe spasmodic pains were felt in the abdomen, with nausea, vomiting, and a constant desire, with ineffectual efforts, to evacuate the bowels. Intussusception was diagnosticated, and the diagnosis confirmed by celiotomy. The vermiform appendix seemed to have been thrown around the ileum, the constriction thus produced leading to the intussusception. The appendix was removed after reduction had been effected. On the fifth day the bowels were moved by a glycerin-and-water enema. The stitches were removed on the ninth day, and the wound supported with adhesive strips. The pulse and temperature were but slightly affected, and recovery was rapid and complete.

The second case occurred in a man thirty-two years of age, who fell into a ditch two or three feet deep, experiencing slight pain in the left inguinal region. Two days later the abdomen became swollen and painful, and there were nausea and constipation. A globular enlargement could be seen in the lower part of the abdomen. Purgatives had been administered for two days without effect, except to increase the pain. Volvulus was suspected, and an operation for its relief undertaken. On opening the abdomen the suspicion was confirmed. The sigmoid flexure was found so distended that replacement within the peritoneal cavity was impossible. A rectal tube was passed, liberating a large amount of gas, after which the bowel could easily be replaced. After the fifth day the bowels were moved daily by enemata. Complete recovery followed without incident, the patient being dismissed thirty days after operation.

The third case occurred in a man, aged eighty-one years, who, while in apparent health, suddenly developed the symptoms of acute shock. There was sudden severe pain to the right of the umbilicus, which was thought to be due to the presence of gall-stones. An anodyne gave relief for two days. Then the abdomen became uniformly distended. There were nausea and vomiting, first of the stomach-contents, and later of stercoraceous matter. There was no point of special tenderness. An operation was undertaken, and a loop of small intestine was found to have slipped through Meckel's diverticulum. The adhesions were so firm that it was necessary to apply double ligatures and cut between them, so that the condition must have been one of long standing. After the operation, uncontrollable vomiting continued, and death occurred thirteen hours later without reaction having taken place. Regret was expressed that the stomach was not washed out, as this might have relieved the vomiting. Earlier diagnosis and a younger age would both greatly have increased the chance of recovery.

DR. MARCY, of Boston, emphasized the value of washing out the stomach in cases complicated with protracted vomiting.

DR. JOHN B. ROBERTS, of Philadelphia, followed with a paper on "Unnecessary Restrictions in Surgery." He made a strong plea for the treatment of every surgical case on its merits, rather than by rule. The opinion was expressed that many patients are detained in bed unnecessarily long on account of fractures of the bones of the legs, and that patients with fractures of the forearm are often likewise burdened with cumbersome dressings long after the usefulness of these had ceased to exist. Sprains and chronic joint-affections often demand massage and passive motion, rather than continued rest. It was held that the habit of restricting the diet of patients for days after an operation is unnecessary, as well as a large number of other customs that have been taught and practised for so many years that almost no one stops to consider whether they are rational or not.

DR. JOHN E. LINK, of Terre Haute, presented reports of a number of cases affording evidence of the surgical immunity of the peritoneal viscera. He gave the results of many operations performed in the most careless manner on dogs, and always with the recovery of the animal. The object was to show that when skilled surgical aid cannot be obtained the family physician should proceed to operate in cases of abdominal injuries or other serious acute conditions, inasmuch as the peritoneum is much more tolerant of invasion than has been generally supposed, and the danger of delay in operating far outweighs that to be feared from opening the abdomen. Dr. Link demonstrated his method of operating on dogs, and showed several specimens taken from animals previously operated upon.

In the discussion considerable difference of opinion was expressed as to the exact value of operations on animals in judging of the possibilities in the human subject.

SECOND DAY—JUNE 7TH.

DR. CHRISTIAN FENGER, of Chicago, described an "Operation for Stricture of the Ureter in Hydronephrosis and Pyonephrosis." He pointed out that in hydronephrosis or pyonephrosis there must be an obstruction somewhere. In many cases of intermittent discharge the difficulty is due to oblique insertion of the ureter into the pelvis, and the consequent formation of a valve at the point of junction. The fluid is prevented from passing

until the distention and pressure are sufficiently great to overcome the obstruction, and the accumulation escapes. Dr. Fenger has operated on such a case by splitting the valve and stitching its margins apart after opening the pelvis. Strictures of the ureter also cause hydronephrosis or pyonephrosis. They may result from ureteritis or from indirect traumatism. A case was reported in which pyonephrosis developed two years after a fall. An operation was performed, the stricture divided longitudinally, and stitches passed in the same direction as the line of the incision, thus converting the longitudinal into a transverse wound. The appearance of blood in the urine for a few days demonstrated the patulousness of the ureter. Recovery was complete. The best incision for this operation is the lumbar one, from the twelfth rib to the crest of the ilium, and then extended to the middle of Poupart's ligament. This gives ready access to the upper two-thirds of the ureter. The lower third can be reached by sacral resection. The value of relieving obstruction to the ureter is shown by the fact that after nephrotomy a fistula remains in 45 per cent. of the cases; while nephrectomy is to be avoided if possible, as the condition of the opposite kidney is generally not known, and the radical operation may result in speedy death from uremia if the second kidney is also diseased.

DR. J. B. MURPHY, of Chicago, read a paper entitled "What Operations May We Perform on the Gall-bladder?" It was contended that the function of the gall-bladder is to regulate the pressure in the bile-ducts, as the air-chamber does in the steam pump. In support of this view reference was made to the fact that the bile is always much more concentrated in the gall-bladder than in any of the ducts, and also that in a very large number of operations upon the living subject, the cadaver, and upon animals, the gall-bladder was never found empty in health. The pathologic conditions of the gall-bladder calling for operative interference are chiefly cholelithiasis, cholecystitis, carcinoma of the head of the pancreas, neoplasms involving the ducts, carcinoma of the gall-bladder, and trauma. The operations, naturally, all necessitate celiotomy. Of twenty-five cases of simple puncture collected, one-fourth terminated fatally. This is to be explained by the fact that the walls of the gall-bladder are so dense and so slightly contractile that the puncture-opening remains patulous, and thus allows the contents to continue to escape. In twenty-three cases in which an incision was made and drainage provided for, the mortality was eighteen per cent. Dr. Murphy has had made a modification of his anastomosis-button, in which one part is two and a half or three inches in length, and, being hollow, allows the bile to escape entirely externally to the peritoneal cavity, so that it is impossible for any leak to occur. In fifty-nine cases collected, in which cholecystotomy was performed in two sittings, the death-rate was but ten per cent.—a very favorable showing. The same operation performed at one sitting, as advocated and practised by Tait, is a much more serious procedure. Of 201 cases operated on by this method twenty-five per cent. died, and in many others a sinus persisted. Incision with immediate suture —ideal cholecystotomy—has been practised a number of times. In thirty cases collected there were six deaths—a mortality of twenty per cent. Dr. Murphy advises joining the gall-bladder with the intestine (cholecystoenterostomy) in all cases in which it is necessary to perform cholecystotomy. This permits of complete closure of the abdominal incision, and digestion is not impaired by the escape of bile externally. Nussbaum was probably the first to employ this procedure, but on account of the great difficulty in effecting the anastomosis, the operation was gradually abandoned. By means of the anastomosis-buttons designed by Dr. Murphy, the operation becomes a simple one that can be quickly performed. Eleven cases have been collected. Seven have been operated on by Dr. Murphy himself; recovery taking place in all. Two other operations mentioned were also successful. The method was demonstrated by an operation on a living dog.

DR. M. E. CONNELL, of Wauwatosa, Wis., read a paper upon "Intestinal Anastomosis by an Improved Method, Without Plates and With Two Knots; Either Silk or Catgut May be Used." Specimens were exhibited and the operation explained by reference to diagrams. End-to-end approximation or lateral apposition may be practised, the latter being the simpler. The operation is performed as follows: After making the necessary incisions, a suspending loop is inserted in the bowel just beyond the ends of the cuts, and held by an assistant. A suture, three feet long, is made to transfix all of the coats of one margin of the wound, and passed in the opposite direction through all the coats at a corresponding point on the other end of the bowel. This is repeated until the whole length of one side of the wound has been traversed, always leaving a loop of an inch or two.

Then, by turning the bowel over, the other margin of the wound is closed by passing stitches in the same manner; but this time, drawing them taut, so as to close the wound. This having been completed, the two ends of the first suture are pulled upon, and, after the apposition is accurate and firm, a knot is tied in each end. After the second knot has been tied, both ends are cut close.

DR. E. WYLLYS ANDREWS, of Chicago, stated that he had recently used Dr. Murphy's buttons in a case of strangulated femoral hernia in which it was necessary to resect fifteen inches of gangrenous intestine. He made an end-to-end approximation. The subsequent course of the case was entirely favorable, and recovery was prompt and satisfactory.

DR. H. O. WALKER, of Detroit, referred to the short time required to perform anastomosis by Murphy's method, and believed this one of the strongest arguments in its favor.

DR. BAYARD HOLMES, of Chicago, reported "A Case of Chronic Glanders, with Recovery." It was pointed out that glanders in man is of two kinds: (1) acute, in which death usually occurs in three or four months, and (2) chronic, in which the patient may recover after three or four years. In the case reported the patient was a farmer, twenty-two years old, who had always enjoyed good health. In December, 1889, one of his horses became stiff, had a discharge from the nose, and died in a week. The mate to this horse also became sick, and had numerous pustules over the body. In a short time the patient noticed a sore on one of his fingers. The affection was thought to be a carbuncle. In a short

time five foci of the disease appeared in different portions of the body. There was at first sharp, burning pain, like that which follows the sting of an insect, and deep swelling. At three points spontaneous opening took place. When the patient came under observation it was decided to remove the disease radically by the cautery instead of the knife. The diseased area was scraped thoroughly, the surface brushed with a strong solution of zinc chlorid and packed with iodoform-gauze dipped in a concentrated solution of potassium iodid. In all, fourteen different lesions appeared, requiring twenty different operations. Adenitis occurred but once. The diagnosis was confirmed by inoculation of animals.

DR. ERNEST LAPLACE, of Philadelphia, read a paper on "A New Operation for Varicose Veins," which consists in ligating the long saphenous vein at the saphenous opening, and the short saphenous vein between the two heads of the gastrocnemius. The after-treatment consists of rest in bed, elevation of the limb, and careful wrapping in cotton. The patient may be allowed to arise in two or three weeks. Seventeen cases were reported, in six of which the operation was bilateral. All did well, and the ten recently heard from remain free from their trouble. Cocaine anesthesia was used.

The Nominating Committee reported the following: For President, Dr. John B. Roberts, of Philadelphia; Vice-President, Dr. J. D. Griffith, of Kansas City; Secretary, Dr. Floyd McRae, of Atlanta, Ga.

DR. R. MERRILL RICKETTS, of Cincinnati, O., showed "specimens demonstrating the operation of gastro-colotomy, end-to-end anastomosis of gut, and the connecting of the gall-bladder and the alimentary tract, as performed with the Murphy button and by the Mansell operation." From experiments on animals the conclusion is reached that the Mansell operation is one of the best methods thus far described. It may be rapidly performed, and meets all of the requirements.

DR. THOMAS H. MANLEY, of New York, read a paper entitled "A Few Notes on Tibio-tarsal, Tarsal, Medio-tarsal, Tarso-metatarsal, Phalangeal, Traumatic, and Artificial Amputations in the Lower Extremities; Substitutes for Parts Lost in this Situation." A plea was made for more conservative surgery in cases of traumatism of the lower limb. The rule was laid down never to perform an immediate primary operation. Not a particle of tissue should be sacrificed that will survive; a secondary operation is to be preferred, if the patient so desires, for the cosmetic effect or the greater usefulness of the member.

DR. QUIMBY, of Jersey City, coincided with the recommendation to save all tissue possible. He referred to a modification of Pirogoff's amputation, that he introduced in 1877, in which he does not resect the ends of the tibia and fibula, but places the sawed surface of the os calcis against the articular surfaces of the tibia and fibula. This is of great importance in children, as the epiphysis is thus spared, and the growth of the bone, therefore, not interfered with.

DR. MACLEAN, of Detroit, pointed out that mere removal of the articular cartilage would not interfere with the epiphysis. He still adheres to Syme's operation as the best in this situation, especially when the operation is performed for disease. If it is necessary to operate above the ankle the point of election is to be preferred.

DR. SUMMERS, of Wisconsin, indorsed the procedure recommended by Dr. Quimby, and asserted that a recent (traumatic) surface united better to a serous surface than to another recent (traumatic) surface.

DR. JOSEPH HOFFMAN read a paper on "Appendicitis: What It is and What It is Not, from a Surgical Standpoint." He said that it is now settled that the appendix is situated in the peritoneal cavity, and therefore all inflammations of the process are intra-peritoneal. The anatomic relations of the appendix are such that a considerable degree of mobility is permitted, and the symptoms of appendicitis therefore vary in different cases. The presence of pus is always an indication for operation without delay. In recurring attacks, operation in the quiescent period is to be considered.

DR. MURPHY, of Chicago, advocated the removal of the appendix in every case as soon as the diagnosis is made. He has operated 95 times for removal of the appendix, with 7 deaths, 5 from general peritonitis, which had been present before the operation, and 2 from pyemia.

DR. SENN cautioned against operating without careful consideration, as the operation may present considerable difficulty. In recurrent attacks, however, removal of the process is to be recommended.

DR. RANSOHOFF, of Cincinnati, Ohio, read a paper on "The Extirpation of Aneurisms," based on two cases thus treated. One was a case of bronchial aneurism; the other a case of anterior tibial aneurism. In each case an incision was made over the tumor; the vessel traced in both directions; two ligatures applied, both above and below; the artery cut between; and the tumor enucleated. The following propositions were submitted: (1) extirpation is the ideal operation; (2) in aneurisms of the forearm and leg no other method should be employed; (3) in aneurisms that suddenly enlarge, and when rupture seems imminent, extirpation should be employed; (4) in recent traumatic aneurisms, the vessel should be ligated above and below, and if a sac has formed, this should be removed; (5) after other methods have failed, extirpation should be employed; (6) arterio-venous aneurisms should be subjected to the same treatment; (7) proximal ligation may be performed when the age of the patient, the location, or other causes contra-indicate extirpation.

DR. JOHN A. WYETH, of New York, described "An Operation for Anterior Cleft Palate in Infants and Older Children." The method advised is first to drill two holes in the hard palate; pare the mucous membrane from the margins of the cleft, and, with strong scissors or with delicate bone-forceps, divide the alveolus on the short side at about its middle, and slide the anterior fragment forward and wire in this position. This closes the anterior part of the cleft. The lip may be operated on at the same time, or subsequently, as seems best.

SECTION ON PRACTICE OF MEDICINE.

FIRST DAY—JUNE 6TH.

The section was called to order by Dr. CHARLES G. STOCKTON, of Buffalo, who delivered the Chairman's Address. His subject was "A Review of Ulcerative Endocarditis." He referred to the fact that a few years

ago endocarditis was considered a simple inflammation of the lining membrane of the heart. After Osler's lectures, in 1885, it became clear that the disease was sometimes infectious, and endocarditis was spoken of as acute, chronic, and malignant, and ulcerative. In relation to rheumatism reference was made to the chemical theory of Prout and the nervous theory of Mitchell, but the disposition was manifested to accept the germ-theory as being more rational. From the known facts it was concluded that endocarditis may, under favorable conditions, arise from any one of a multiplicity of special causes, and that its course may be as variable as the causes are dissimilar. Of the two classes, malignant and non-malignant, the paper dealt with the former. Ulcerative endocarditis depends upon the presence of a microörganism that generally attacks the endocardium as the result of some preceding affection. Some forms of microörganisms have the apparent faculty of inducing endocarditis in the healthy organism, and are regarded as special to this form of disease. Weichselbaum has discovered four such organisms; Fraenkel and Saenger have described one, and Lion and Girode still another. The bacillus coli communis has in some cases been the active agent in the development of this disease. A case has been reported by Dr. W. T. Howard, Jr., in the *Johns Hopkins Hospital Bulletin* for April, 1893, in which malignant endocarditis was found to depend upon a bacillus having morphologically and culturally the characteristics of the bacillus of diphtheria, although the patient presented no history of having had diphtheria. Different microörganisms produce different pathologic chemical results. Some organisms invade the mitral and some the aortic valve by preference. Careful observations show that the main valves are first invaded. According to Saenger the valves in a pathologic state contain vessels in which colonies of bacteria are found, so that the process may be primarily intra-valvular; but in many cases the disease appears upon the free surface of the valves.

In Taylor's series, in 11 of 53 cases of endocarditis, the lesion occurred on the right side. Lion suggests that aërobic bacteria grow best in the arterial blood of the left side, and anaërobic in the carbonized blood of the right heart. The opinion was expressed that cases of malignant endocarditis recover, and that it is a mistake to apply the term simple endocarditis to all cases that have a favorable termination.

DR. J. G. TRUAX, of New York City, said that he had seen some 13 cases of ulcerative endocarditis, all of which were fatal. He thought that the condition is almost invariably complicated with some other disease; most of his cases had articular rheumatism. In two-thirds of his cases a mistake in diagnosis was made, the true condition being revealed by the autopsy.

DR. H. D. DIDAMA, of Syracuse, N. Y., referred to the experiments of Richardson, who produced not only articular rheumatism but also endocarditis by injections of lactic acid. He thought the fact that the disease occurred five times as often on the left side of the heart as on the right might be explained by the infection taking place by the air-passages. He thought that many of the microörganisms found in connection with endocarditis do not fulfil Koch's condition, that a specific organism must be found in that particular disease and in no other, and that cultures must be identical and inoculation produce the same disease.

DR. H. J. HERRICK, of Cleveland, Ohio, thought endocarditis a secondary form of disease. He also thought that if the blood is in perfect condition there could be no endocarditis, and that treatment should be directed to the predisposing cause.

DR. W. H. WASHBURN, of Milwaukee, read a paper entitled "Some Considerations Bearing on the Treatment of Pneumonia." He took the position that the death-rate of pneumonia is gradually on the increase in this country under the present methods of treatment, which are mainly expectant in nature. As long as we are unable to destroy the *materies morbi* of pneumonia, all efforts at treatment can at the best be but palliative. Efforts must be directed toward maintaining the functions of the nervous system. Support of the nervous system and elimination of the specific poisons of the disease and the products of retrograde metamorphosis are the indications for treatment. Alcohol is to be regarded not as a stimulant but as a sedative. It was held that its use in the treatment of pneumonia is illogical and responsible for the high mortality. Strychnine is preferable, as it heightens the sensibility of the nervous system, and is a stimulant to the respiratory center, the cardiac ganglia, the nerves of special sense, and involuntary muscular tissue.

DR. R. R. ROSS, of Buffalo, N.Y., said that before pneumonia could be treated scientifically it must be divided into classes referable to the heart, the poison of the disease, and the lungs, each presenting different symptoms and requiring different remedies. He had seen nitro-glycerin used in a large number of cases, with most excellent results.

DR. JENKS, of Keokuk, Iowa, thought that one reason for the increased mortality, shown by statistics, is that fifty years ago physicians knew nothing of auscultation and percussion, and many cases of fatal pneumonia were called by other names, especially in the aged and children. He believed in treating the disease by drugs and not by expectancy. Calomel should have a place in the treatment of pneumonia. When the pulse keeps up, nothing has proved so useful as nitro-glycerin, given every two or three hours in conjunction with strychnine and digitalis. This combination may be relied upon in the last stage of the disease.

DR. REYBURN, of Washington, did not think bleeding unphilosophic in strong, robust persons, suddenly attacked with pneumonia. He advocated the use of aconite and veratrum viride. Another class of patients should be treated with strychnine, digitalis, the salts of ammonium, and alcohol. He thought that pneumonia was treated more successfully thirty years ago than it is now.

DR. BABCOCK held that pneumonia is more fatal now than thirty years ago. He used quinine, in addition to other treatment. He advocated the use of alcohol, which he considered both a stimulant and a sedative. He had seen good results from the use of flaxseed-meal poultices.

DR. W. E. QUINE, of Chicago, said that it was not the pneumonia that was to be treated, but the individual. In some cases the treatment should be vigorously supportive, in others sedative. Veratrum viride would do good in the early stages.

DR. MARTINE, of New York, believed that pneumonia could be cured by keeping the pulse-rate down to about 80; he had not had a fatal case.

In closing the discussion, DR. NORTH favored the use of alcohol in the first stage. He had never practised venesection, although he had carried a lancet for that purpose for twenty-five years.

DR. ROBERT H. BABCOCK, of Chicago, presented a paper upon "The Medical Aspects of Empyema Following or Complicating Croupous Pneumonia." He believes that owing to its insidious onset, purulent pleurisy is frequently overlooked. He would especially call attention, as supporting this belief, to the vague and general manner in which the disease is treated by most of the textbooks. It is only within a recent period that the progress in bacteriologic research has given the profession a more positive knowledge of this interesting and important condition. In every instance empyema is dependent upon the presence of cocci acting when there has been a previous injury of the serous membrane, or a pre-existing serous effusion. The microörganisms may be of various kinds, as, for instance, the pneumonia-coccus or the bacillus tuberculosis. Frequently, the disease is secondary to some preëxisting affection, especially croupous pneumonia and influenza. If due to the presence of the pneumonia-coccus there is a great tendency to spontaneous evacuation through the bronchi. Four types of empyema may be recognized: (1) Meta-pneumonic empyema, either independent of or in association with croupous pneumonia; (2) a pyemic form, secondary to some local inflammation or constitutional infection; (3) a tuberculous, and (4) a gangrenous form. The existence of empyema may be definitely diagnosticated by the use of the aspirating needle. The prognosis in the form due to the pneumonia-coccus is good, cases usually yielding to simple puncture and drainage. That of the other forms is more grave. These require more active surgical intervention.

DR. W. A. BATCHELLOR, of Milwaukee, has always believed that the treatment of empyema should consist in incision and drainage, but he was inclined, like Dr. Babcock, to view the subject from a bacteriologic standpoint. He thought that many cases could be cured by aspiration and that bacteriologic investigation of pleurisy would lead to better means of treatment.

DR. MARTINE, of New York, thought that reduction in the pulse-rate in cases of pleurisy would prevent empyema.

DR. GEORGE W. WEBSTER, of Chicago, stated that in the last sixteen months he had treated seven cases of empyema in persons ranging in age from three to forty years, by washing out the pleural cavity with a saturated solution of boric acid. All recovered.

SECOND DAY—JUNE 7TH.

DR. J. M. ANDERS, of Philadelphia, read a paper entitled "Points in the Clinical History of Erysipelas," in which he called attention to the influence of the various seasons of the year upon that disease. From a careful study of a large number of cases collected from hospital and private practice, it has been found that the largest number of cases occur in April, and that from April to August there is a gradual decrease in the number, the latter month giving the minimum record. The period of life at which the disease is most common is not yet positively determined, though it is believed to be more frequent in the young. More than one-half of the cases collected occurred under thirty years of age, and these were largely between the ages of twenty and thirty. Of 1787 cases, 1239 were males and 548 females. Slight wounds and contusions of the face and head are exceedingly common as starting-points of the disease. In only 7.8 per cent. was the affection secondary to chronic disease. Individual predisposition was noted in but a small proportion of cases, and family predisposition in a still smaller proportion. The average duration of the affection in over 1000 cases was twenty-five and one-tenth days; if the individual was in an enfeebled condition the duration was longer. In persons under forty years of age the average duration was but fourteen days. Erysipelas is a self-limited disease, the age influencing its duration. Relapses occurred in about 10 per cent. of cases; single relapses are frequently observed in young and healthy subjects, while multiple relapses are most frequently noted in weakly individuals.

DR. HARE, of Philadelphia, dwelt upon the danger of misleading averages. If the ages of the individuals are added and the result divided by the number of patients, the average obtained will frequently be quite different from that obtained by observing the age at which the disease is most common. Erysipelas is quite frequent in cases of pronounced nasal and buccal lesions; in typhoid fever, for instance, such lesions affording entrance to the specific organisms of erysipelas, viz., the streptococcus pyogenes. Its greater frequency in males is to be explained by the greater exposure to traumatism.

DR. MAX EINHORN, of New York City, read a paper upon and gave a demonstration of gastrodiaphany. He pointed out the difficulty of making a correct diagnosis of abdominal disease, especially in the case of the stomach, the organ most frequently diseased. His apparatus consists of a soft rubber tube, to which is attached an Edison lamp. It can be introduced into the stomach with no more difficulty than is required in introducing the ordinary stomach-tube. The patient must be in a fasting condition, and immediately before the passage of the tube, should be given one or two glasses of water. The translucent field will show the size of the stomach; whether it is contracted or dilated; the presence of tumors or indurations of the stomach-walls is indicated by the absence of translucency. Two patients were shown and the workings of the apparatus demonstrated.

DR. AULDE, of Philadelphia, spoke of the value of translumination in the young in the diagnosis of laryngeal disease, and thought that it might be of value in gynecic and rectal disease and abdominal surgery in assisting in diagnosis.

DR. EINHORN said, in conclusion, that the possibility of breakage of the lamp is about *nil*. The covering is made of hard glass, and no such accident has been noted. The water is given for the purpose of distending the gastric walls, which normally are in contact. Were the water not given, the light would shine through the one spot in contact with the lamp. In the case of the rectum and the colon little would be learned unless the bowel were distended with water, and then the result

would still be unsatisfactory on account of the deep location of these structures.

DR. JOS. EICHBERG, of Cincinnati, read a paper entitled "A Case of Sunstroke, with Considerations of its Treatment." He said that the true pathology of sunstroke has not yet been determined, although it is known that there occurs a disturbance of the heat-regulating center. An initial high temperature does not preclude the possibility of complete recovery. The prognosis is largely influenced by the degree of cerebral activity. The treatment consists in the reduction of the temperature by external applications of cold, and the administration of digitalis or the hypodermatic injection of digitalin to stimulate the heart-muscle.

It is best to give a hypodermatic injection before placing the patient in the bath. The great danger of the condition is weakness of the heart-muscle, as shown by the livid skin, pulmonary congestion, flabby right heart and dilated veins. This weakness is due to a chemical change in the heart-muscle and in the muscular tissue of the vessels, and is brought about in an incredibly short time. As the temperature of the blood rises the organs respond, and especially the highly specialized brain, which shows the reaction in the form of convulsions and coma. By applying cold to the surface the blood is cooled, and this running to the right heart abstracts heat from the circulation there, thus tending to lessen the danger. The therapeutic effect of digitalis in lowering temperature is due probably to a lessening of the heat-production by its action on the heat-center. Death is the direct result of a lesion of the sympathetic system. The habitual use of malt liquor is of considerable influence in predisposing to an attack, because of the formation of fat in the tissues, and especially around the heart, thus giving rise to a weak organ. In such cases the external application of cold is much less efficacious because of the fatty envelop around the heart. Time is an important factor in the treatment, a delay of a few minutes often resulting in death.

Dr. R. R. ROSS, of Buffalo, read a paper on "The Treatment of Insolation." He confined his remarks to sunstroke, and did not dwell on all that is conveyed by the term thermic fever. High degrees of temperature may be borne if the air be dry, hence sunstroke is rare in dry hot countries. Those who have clean skins and a good vasomotor system are less prone to sunstroke. H. C. Wood speaks of a peculiar odor emanating from the patient and present in the feces. Putrefactive changes occur very promptly after sunstroke. The prophylaxis consists in cleanliness and the avoidance of mental and physical exhaustion.

Antiseptics are not only useless, but absolutely dangerous; they may produce heart-failure and exert a destructive influence upon the blood corpuscles. To reduce the temperature of the body is important, but the manner in which this is done is also important. It is radically wrong to pack the patient in ice, on account of the secondary depressing effect or shock that results. The bloodvessels are contracted, and only a small amount of blood comes in contact with the cold. The temperature of the bath should be 45° or 50°, and the patient should be immersed for two or three minutes, the head being cooled as rapidly as the body. Then the skin must be rubbed with a coarse towel, and the process repeated. Atropine, sulphuric ether, camphor and strychnine are used according to circumstances. The temperature will fall one degree every ten or fifteen minutes. The diet of convalescents should be liquid and farinaceous, and include nothing that will produce heat. Salines are of value.

DR. HARE, of Philadelphia, expressed doubt that the danger in sunstroke is due to combustion. He believes that it is due to the change that takes place in the nervous system. He emphasized the fact that friction of the surface must be practised to bring the heated blood to the surface, so that it may be cooled. H. C. Wood has shown that immediately after death the heart is in a condition of complete systole, and only dilates some time after death. It was objected to that so much importance is attached to the sympathetic system, as it is perhaps not so seriously involved as is supposed.

DR. ROSS expressed the belief that the cases attended with unpleasant sequelæ are those that have been exposed to the high temperature for a long time—from five to ten hours.

DR. N. S. DAVIS, JR., of Chicago, read a paper entitled "Some Remarks on Diabetes," Clemens's solution was advised in treatment, except in the more advanced cases. The dose should be increased to toleration, unless the desired therapeutic effect is obtained before. Doses of six or eight minims are usually sufficiently large. Strychnine arseniate has also proved efficacious. Pancreatic extracts have also been tried, but have generally been found of doubtful value.

DR. DIDAMA alluded to the difficulty of determining which cases are of pancreatic origin, and cited one in which treatment with pancreatic extract had been useless.

DR. JAMES W. PUTNAM, of Buffalo, read an excellent article on "Headache." He first considered the part played by heredity in a given case of headache, and secondly the personal history as regards syphilis, dyspepsia, etc. Then the history of the headache should receive consideration, when, and under what circumstances it came on, etc. The character of the headache itself is then to be observed, its periodicity, location, and characteristics. The peculiarities of the two great classes of headache, the anemic and the congestive, were then discussed, together with the methods of treatment. Syphilitic headache is easy of diagnosis and treatment. Reflex headache from eye-strain is common, but oculists often fail to afford relief, owing to imperfect correction of the ocular defects. The treatment of chronic cases must be continued by the oculist after the refractive error has been corrected. In almost all cases of headache, whatever the cause, relief or cure is possible if the case be carefully studied.

DR. WHITTAKER, of Cincinnati, thought eye-strain an overrated factor. Instances of failure to cure are often due to faulty urinalysis. Gonorrhea is often attended with headache.

DR. E. T. FERGUSON, of Troy, N. Y., contributed "An Additional Note on the Treatment of Exophthalmic Goiter." Fifteen or twenty cases that had come under observation since his previous report had improved under treatment with strophanthus, and there had been no relapses. The dosage varies in different cases. The initial dose is eight or ten drops, three

times daily, which may be increased until the desired effect is produced.

DR. HARE, of Philadelphia, alluded to the variation in the type of the affection. He had never found strophanthus to act well, but sometimes to cause severe diarrhea.

DR. ANDERS, of Philadelphia, stated that, used alone, strophanthus does not give good results; but, when arhythmia exists, a combination of strophanthus and digitalis regulates the action of the heart better than either drug alone.

DR. PINE, of Chicago, thought tachycardia often the first stage of Graves's disease.

DR. CHARLES DENISON, of Denver, read a paper entitled "The Mutual Interest of the Medical Profession and Insurance Companies in the Prolongation of Life." He did not advocate the insurance of invalid risks, but intimated that the time might come when a better understanding of the varying longevities of invalids may lead to a knowledge of their insurability. A study of the mortality statistics of the Mutual Life Insurance Company of New York shows that as early as the third year of insurance most of the advantage of the selection of risks is practically lost. From the second to the tenth year of insurance there is a mortality of 23 per cent. from some form of tuberculous disease. Believing latent tuberculosis to be the cause of more failures in health than is usually supposed, Dr. Denison urged the employment of more exact and systematic safeguards against accepting such lives on an equal footing with selected healthy risks. To this end, spirometric and manometric records should be included in the report of the examiner. Then, if either or both are below a given fair standard (say 25 or 30 per cent. below) for height, sex, age, etc., the exposure of the chest and the taking of the semi-circumferential measurements of the two sides should in all cases be required. By these measurements the following results will be reached: First, if an unnatural difference in the respiratory movements of the two sides of the thorax has to explain, by inference, a deficient spirometric record, with a manometric record normal for that person, then surely that inference indicates fibrosis or pleuritic adhesions and perhaps latent tuberculosis. Second, if, with a similar variation in movement, a marked deficiency in the manometric record has to be explained, the spirometric record being all right, then the inference is indicative of positive weakness, which must influence the applicant's vitality. Third, if, however, deficiency below a standard of health both in the spirometric and manometric record can or cannot be accounted for by deficient movement of one or both sides, there is then a suspicion of weakness, to possibly elucidate which a more careful investigation is needed before accepting the risk.

DR. SIEGER, of Brooklyn, stated that he understood the paper to advise insurance companies, as a business investment, to send their tuberculous cases to the West to regain health. On account of the novelty of the suggestion he moved that a committee be appointed to take the paper and its reccommendations into consideration, and to report upon them before the close of the Association meeting. Such a committee was appointed.

DR. J. H. HOLLISTER, of Chicago, then read a paper on "The Treatment of Cholera." He accepted Koch's bacillus as the cause of cholera, and said that the problem is to prevent the transfer of the organism from one person to another. Sterilization of everything coming from the sick is the certain means of safety. In treatment opium is now discarded. Treatment with an acid is common in the first stage; sulphuric acid drinks are best. Thymol was recommended, hypodermatic injections having proved remarkably successful. Tannic acid, however, is the most praised of all drugs. It is to be given by rectal injection, together with large amounts of water. Much is hoped from Haffkine's method of inoculation.

DR. PINE, of Chicago, thought it a formidable undertaking to sterilize one thousand square inches of intestinal mucous membrane. Opium is the essential ingredient of all cholera-mixtures, and he would prefer the opium-treatment to-day to any of those advocated.

DR. WHITTAKER, of Cincinnati, read a valuable paper on "The Present Status of Tuberculin," in which he set forth the reason and methods of the action of the agent. If the preparation be too energetically employed it may increase the virulence of the bacilli and scatter them throughout the system. It excites a true acute inflammation, just as the living bacilli themselves do within the system. Koch's followers attribute the bad effects to complications and to improper administration, but maintain that the agent is a true specific for tuberculosis. Every claim made by Koch will be substantiated, and to use it is to believe in it. It must be remembered that there are no uncomplicated cases. Human tuberculosis differs from laboratory tuberculosis. Invasion by micrococci is often secondary to the tuberculous. Invasion by streptococci is probable whenever cavities exist. Tuberculin is of the utmost service and certainty as a diagnostic agent. It is especially valuable as a therapeutic agent in incipient cases, and in other diseases when the existence of tuberculosis is masked by unexpected symptoms. Quiescent cases should be left alone and all cases individualized. Tuberculin reaches the cause of the disease, and is more rapid in its curative effect than any other therapeutic agent.

DR. DENISON, of Denver, agreed with Dr. Whittaker, and alluded to tuberculocidin, which he often uses in preference to tuberculin. He relies on this method in selected cases, and commends especially its use as a diagnostic agent.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

FIRST DAY—JUNE 6TH.

The Chairman, DR. J. M. DUFF, of Pittsburg, delivered the Annual Address. His subject was "Some General References to Obstetrical and Gynecological Advancement." He said that the large number of papers offered from all parts of the country, from men of the highest standing in the profession, is significant of the general zeal and welfare of the American Medical Association. Regarding operative work, the solicitude of many with reference to the operative mania that had taken possession of the profession during the past few years is not without cause. No one would have the temerity to deny that there has been, and yet is at the hands of some, too much indiscriminate, useless, and ofttimes reckless

abdominal, gynecic, and obstetric surgery. The past year has witnessed a great improvement in this direction. Few diseases are more prevalent than carcinoma of the uterus, and none was formerly more universally fatal. There is now a very general consensus of opinion that the disease is of local origin, and not, as formerly supposed, a general disease, with a local manifestation. In 474 hysterectomies at the hands of five different operators, there was a primary mortality of only 8.4 per cent., and at the end of two years in 56.25 per cent. of 82 vaginal hysterectomies performed by Leopold, the patients were living without a recurrence of the disease. The gynecologic treatment of the insane has been one of the live topics during the year. The intimate relationship existing between the brain and the generative organs would rationally lead us to infer that in women predisposed to insanity, disease of the organs of generation might in some cases be an exciting, if not a direct cause of mental alienation. Absolute proof could be found in the results of a number of painstaking investigators.

DR. CHARLES P. NOBLE, of Philadelphia, read a paper entitled "The Causes of Diseases of Women." He called attention to the fact that within recent years the thoughts of gynecologists had been largely occupied with the study of the pathology and treatment of tubo-ovarian disease, and that, as a consequence, very little had been said in a systematic way concerning the causes of the diseases of women. The object of the paper was to present a brief outline of the nature of the causes of diseases of women, and to point out that these causes are largely of a preventable nature. The principal causes are: 1, imperfect development of the sexual organs; 2, gonorrhea; 3, septic inflammation following child-birth; 4, lacerations due to child-birth; 5, miscellaneous causes, including constipation, erroneous habits of life, and errors of dress.

DR. HOWARD A. KELLY, of Baltimore, called attention to the great importance of tuberculosis of the female genitalia. Many of the cases that come under his observation are tuberculous in character. He should say that at least 5 per cent. of the cases of inflammatory diseases upon which he operates are tuberculous.

DR. E. P. DAVIS, of Philadelphia, directed attention to neuralgias, and more particularly those of the pelvic viscera.

DR. JOSEPH PRICE, of Philadelphia, was satisfied that many menstrual disorders begin in infancy, and that vulval and vaginal discharges in infants are neglected. Some infantile conditions are over-treated; and many young women would conceive and bear children had they not been treated.

DR. REED, of Ohio, said that deranged or vicious menstruation grew out of imperfectly developed sexual organs. The most difficult cases he had to manage were those in which both the uterus and other organs were undeveloped.

DR. HENRY J. CARSTENS, of Detroit, could not entertain the opinion that gonorrhea is the cause of nearly all the diseases of women. The habit among women of inducing abortion is an etiologic factor of paramount importance.

DR. HOFF, of Ohio, protested against the statement that many young girls have had gonorrhea. While this might be true in Philadelphia, it will not hold good in Ohio.

DR. JOSEPH HOFFMAN, of Philadelphia, called attention to affections of the bladder incidental to parturition and to the puerperal state, brought on by constipation and by dislocation of the uterus, etc. He thought that many of the troubles with which women are afflicted, such as displacements, retroflexions, subinvolution, etc., could be avoided by insisting that the patient remain in bed for two weeks after childbearing.

DR. E. H. N. SELL, of New York, cited families in which the younger members, boys and girls, had gonorrhea. In one case the disease extended so as to involve both bladder and kidney.

DR. L. S. MCMURTRY, of Louisville, said that intrapelvic inflammations sometimes result from forcible dilatation of the cervix. He is satisfied that a great many cases of tubo-ovarian disease result from the habitual and routine application of caustics to the cervix uteri.

DR. JAMES P. KERR, of Pittsburg, followed with a paper on "Puerperal Hemorrhage." He stated that there is no class of cases that require more prompt action and wise judgment. Every case should be treated independently, and as though hemorrhage were impending. Attention should be directed to securing tonic contraction and retraction of the uterus as a prophylactic. This may be accomplished by carefully following the uterus down with the hand after the child has been expelled, and by making pressure over the fundus and by external manipulations. If the uterus be soft and flabby some preparation of ergot should be given, preferably ergotin by hypodermatic injection. It is stated that caffeine acts more readily than ergotin if the patient has lost much blood. Hydrastis canadensis is also considered a useful remedy in the treatment of hemorrhage, both during pregnancy and during and after parturition. It should be administered to all patients with a predisposition to flooding. Plugging the vagina has been advocated when the os is dilated, but this is not considered good practice. A novel mode of treatment consists in inverting the uterus, and putting an india-rubber band around the neck of the inverted organ; at the end of six hours the band is removed and the uterus replaced.

The following recommendations were made by the Nominating Committee: For President, James F. Hibbard, of Richmond, Ind.; for First Vice-President, John C. Wyeth, of New York; for Second Vice-President, I. N. Love, of St. Louis, Mo.; for Third Vice-President, Thomas Murrell, of Little Rock, Ark.; for Fourth Vice-President, U. O. B. Wingate, of Milwaukee; for Treasurer, R. J. Dunglison, of Philadelphia; for Secretary, W. B. Atkinson, of Philadelphia; for Assistant Secretary, L. H. Montgomery, of Chicago; for Librarian, George N. Webster, of Chicago; for Editor of the *Journal of the Association*, J. C. Culbertson, of Chicago; for Trustees to fill the places of those whose term has just expired, John B. Hamilton, of Chicago; L. S. McMurtry, of Louisville; E. F. Ingalls, of Chicago; E. E. Montgomery, of Philadelphia; for Members of the Judicial Council, J. N. Quimby, of Jersey City; J. McFadden Gaston, of Atlanta, Ga.; A. F. Jonas, of Omaha; H. J. Murphy, of St. Paul. The next meeting to be held at San Francisco, California.

(To be continued.)